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# JOURNAL

OF THE

# STATISTICAL SOCIETY

OF

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VOL. XI.

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LONDON:

JOHN WILLIAM PARKER, 445, WEST STRAND.

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## NOTICE.

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THE Council of the Statistical Society of London wish it to be understood, that, while they consider it their duty to adopt every means within their power to test the facts inserted in this Journal, they do not hold themselves responsible for their accuracy, which must rest upon the authority of the several Contributors.

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QUARTERLY JOURNAL  
OF THE  
STATISTICAL SOCIETY OF LONDON.

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MARCH, 1848.

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*Report of a Committee of the Council of the Statistical Society of London, consisting of LIEUT.-COLONEL W. H. SYKES, V.P.R.S., DR. GUY, and F. G. P. NEISON, ESQ., to investigate the State of the Inhabitants and their Dwellings in Church Lane, St. Giles's.*

[Read before the Statistical Society of London, 17th January, 1848.]

IT is only necessary to premise, that the inquiry of the Committee is consequent upon communications made to the Council by one of its members, respecting the state of the houses and their inhabitants in Church Lane, St. Giles's, which involved such startling circumstances, that the Council deemed it a duty to have them verified and attested, not less for the sake of the public, than to add to those stores of information for the collection of which the Statistical Society was founded.

Your Committee, pursuant to their appointment on the 18th of December, met in Church Lane, on Thursday, the 23rd December, at 1 P.M.:—Present—Colonel Sykes and Dr. Guy, and Mr. Balfour, Agent of the Committee.

Church Lane is situated in the Parish of St. Giles; it is 290 ft. long, 20 ft. wide, and contains 32 houses. It runs parallel with New Oxford Street, and is bounded at the west end by the backs of the new houses in Broad Street, and opens at the east end into George Street. There are several back courts, one of which measures 48 ft. long by 10 ft. broad, and contains seven small houses, the entrance to this court being by a narrow passage 2 ft. broad and 20 ft. long. These houses are of wood, and contain two rooms. Another court is 36 ft. by 24 ft., and contains six small houses. The houses in Church Lane consist of a parlour or ground-floor, of two rooms, a first floor, of one or two rooms, and a second floor, of one room. To the first landing on the stairs of some of the houses, one or two small wooden rooms are attached behind, occasioning considerable risk from fire. The houses have cellars under the ground-floor, but as there is no drainage whatever from them, they are not tenanted, with the exception of two; but some of them are used as day-rooms. The narrow entrance passage into each house terminates in a back yard 5 or 6 ft. square.

The lane is lighted by three gas-lights. Water is supplied three times a week, but there is neither pump, tank, cistern, nor water-butt,

so that the tenants of all the houses, with the exception of one lodging-house, three shops, and a public-house, are compelled to save the water in their respective rooms, in such vessels as they can command; but as the water does not continue on for a sufficient length of time to enable all the inhabitants of the street to secure enough, supposing they had vessels to hold it, they are compelled to deal with the shops or public-house to obtain a pitcherful now and then; and they sometimes are compelled to filch the water from each other.

The back yards are 5 or 6 ft. square, with broken pavement, and most of them have accumulations of filth and night-soil, and the drainage from them (which is superficial) runs through the passage of the houses into the street. The back rooms, most of which are lighted by only one small window, patched with paper and rags, open by low doors into this pestiferous area. These yards are, in most instances, without privies, and in the few cases where they do exist, they are in a most dilapidated condition. In the houses furnished with a water-butt, this vessel is to be found in the yard.

The under landlords, renting the houses, examined by your Committee, on the north side, are Mr. Conroy, marine-store dealer, George Street; Mr. FitzGerald, general dealer; and Mr. Mason, the keeper of the public-house in the street. The superior landlords on the south side, are Lady Hammer and Mr. Grout, and on the north-side, the Buckeredge Estate.

As the value of your Committee's Report would much depend upon the detailed and graphic pictures which it might supply, your Committee resolved to inspect personally every room in every house; but as such an examination of every room in the street would swell the Report to an inconvenient length, your Committee determined upon taking a portion of the houses; and that there might not be the slightest imputation of selection, your Committee resolved to examine the houses in the order of their numbers. No. 1, of Church Lane, being a shop and a corner house, belonging rather to George Street than to Church Lane, your Committee commenced with the house No. 2.

The rooms are let either unfurnished or, if it be not a misnomer, furnished. In the first instance, the walls and floor are bare; and for such rooms, on the 1st and 2nd floor, 3s. weekly are paid. In the second instance, the furniture consists of a small deal table, two rickety or broken deal chairs, a bedstead, without hangings of any kind, flock mattress, two blankets, and one pair of coarse sheets, one bolster, and one quilt, a tub or pail, a pot or pan, and a kettle, and in some cases, a saucepan. These articles constitute the furniture. Crockery, knives and forks, &c., are provided by the tenant. The rent of such a room varies from 3s. 3d. to 5s. 6d., according to size.

#### *House, No. 2.—Parlour or Ground Floor.*

Size of room, 14 ft. long, 13 ft. broad, 6 ft. high; size of window, 5 ft. 3 in. by 5 ft.; rent paid, 8s. weekly for two rooms; under-rent paid, 3d. per night for each adult; time occupied, 28 years by landlady. Number of families, 3; consisting of 8 males above 20, 5 females above 20, 4 males under 20, 5 females under 20, total 22 souls. Number of persons ill, 2, fever and measles; deaths in 1847, 1, measles. Country, 7 English, 15 Irish; trade, dealers and mendicants. State of rooms,

filthy; state of furniture, bad and dirty; state of windows, 21 whole and 9 broken panes. Number of beds, 6; number of bedsteads, 6, in two rooms.

A man and his wife and children, occupying a bed for a week, pay 3s., but 12 adults, at 3d. per night, Sunday not counting, give the landlady 18s. a week for the 8s. she pays, or a profit of 10s.

The rent paid for the ground-floor of this house is 3s. above the ground-floor of other houses in the street.

1,092 cubic feet of air, 1st room, 815 cubic feet of air, 2nd room; total, 1,907 cubic feet of air for 22 persons.

#### *No. 2.—Back Room, Ground Floor.*

Size of room, 11 ft. 4 in. long, 11 ft. 3 in. broad, 6 ft. 5 in. high; size of window, 3 ft. 4 in. by 3 ft. 3 in.

The yard of this house, 6 ft. square, in a very bad state. The privy has no seat or door; night-soil scattered about the yard. Liquid filth under the broken pavement.

This room is rented with the preceding, and may be said to form part of it; the twenty-two tenants being common to the two rooms.

#### *The Cellar of this House*

Was found occupied. 3 beds, 3 bedsteads, dirty. 1 male above 20, 3 females above 20, 4 males under 20, 3 females under 20; total 11 persons: adults pay 3d. per night.

This is the only cellar found with beds in the houses examined.

#### *No. 2.—First Floor.*

Only one room. Size of room, 17 ft. 6 in. long, 13 ft. 9 in. broad, 8 ft. 3 in. high; size of window, 5 ft. 9 in. by 4 ft. 4 in.; rent paid, 3s. weekly; under-rent paid, 1s. 6d. and 1s. 2d. each family; time occupied, 3 months. Number of families, 3, and 1 widow with 4 children; comprising 3 males above 20, 3 females above 20, 4 males under 20, 6 females under 20; total 16. Number of persons ill, —\*; deaths in 1847, —. Country, Irish; trade, dealers. State of rooms, dirty; state of furniture, bad, dirty; state of windows, 24 whole, 6 broken. Number of beds, 3; number of bedsteads, 3.

#### *No. 2.—Second Floor.*

Size of room, 17 ft. long, 13 ft. broad, 8 ft. 3 in. high; size of window, 5 ft. 4 in. by 3 ft. 3 in.; rent paid, 3s. weekly; under-rent paid, 2s.; time occupied, 2 years. Number of families, 2; consisting of 3 males above 20, 2 females above 20, 3 males under 20, 4 females under 20; total 12. Number of persons ill, 1, asthma; deaths in 1847, none. Country, Irish; trade, dealers. State of rooms, dirty; state of furniture, bad, dirty; state of windows, 21 whole, 8 broken. Number of beds, 3; number of bedsteads, 2.

Three females sleep in one bed. A son, aged 22, sleeps with his mother.

\* As a general rule, the blanks in the Report may be understood to indicate that the particulars specified were not ascertained. It was deemed right to print the agent's notes with only such corrections as were indicated by the memoranda taken on the spot by the reporters, and such slight verbal alterations as were necessary to clearness and accuracy.

*Tuesday, 28th December, 1847.*

Present—Col. Sykes, Dr. Guy, F. G. P. Neison, Esq., and the Agent.

The Committee proceeded to inspect the houses next in order.

*House, No. 3.—Two Parlours on Ground Floor.*

Size of rooms:—front room, 17 ft. 6 in. long, 13 ft. 9 in. broad, 8 ft. high; size of windows, 5 ft. 4 in. by 4 ft.; back room, 11 ft. 4 in. square; rent paid, 5s. weekly; under-rent paid, 1s. 6d. each adult; time occupied, 5 years. Number of families, 4; consisting of 5 males above 20, 5 females above 20, 3 males under 20, and 4 females under 20; total 17. Number of persons ill, —; deaths in 1847, —. Country, Irish; trade, dealers and mendicants. State of rooms, dirty; state of furniture, bad and dirty; state of windows, 8 panes whole, 8 broken. Number of beds, 6; number of bedsteads, 5, of which 3 in front room 2 in back. Yard filthy, covered with night soil; no privy, no water.

These are nightly lodging-rooms, and the landlady frequently accommodates four or five more persons at 3d. per night. The entrance to the back room is by a door 4 ft. 2 in. by 3 ft., the room itself being a kind of black-hole.

*No. 3.—First Floor,—One Room.*

Size of room, 17 ft. long, 13 ft. broad, 9 ft. high; size of only window, 5 ft. 4 in. by 2 ft. 2 in.; rent paid, 3s. weekly; under-rent paid, 1s. each family; time occupied, 3 months. Three males above 20, 5 females above 20, 5 males under 20, and 4 females under 20; total 17. Number of persons ill, 1 low fever; number of deaths in 1847, —. Country, Irish; trade, labourers and dealers. State of rooms, dirty; furniture, only 1 chair and table; state of windows, 9 whole panes, 3 broken. Number of beds, 3, made of shavings; number of bedsteads, 1.

*No. 3.—Second Floor,—One Room.*

Size of room, 17 ft. long, 13 ft. broad, 9 ft. high; size of window, 5 ft. 4 in. by 2 ft. 2 in.; rent paid, 3s. weekly; under-rent paid, —; time occupied, 7 years. Number of families, 1; comprising 1 male above 20, 1 female above 20, 3 males under 20, and 3 females under 20; total 8. The eldest boy 15 years of age. Number of persons ill, 1, cold and fever; deaths in, 1847 —. Country, Irish; trade, dealer. State of rooms, dirty; state of furniture, bad; state of windows, 7 whole panes, 5 broken. Number of beds, 2; number of bedsteads, 2.

*No. 3.—Back Room opening from Stair Landing.*

Size of room, 11 ft. 2 in. long, 9 ft. 4 in. broad, 6 ft. high; size of windows, 3 ft. 9 in. by 2 ft. 11 in.; rent paid, 3s. weekly, furnished; under-rent paid, —; time occupied, 3 years. Number of families, 1; comprising 1 male above 20, 2 females above 20, 2 males under 20, and 2 females under 20; total 8. Number of persons ill, 1; deaths in 1847, —. Country, Irish; trade, blind beggar. State of rooms, dirty; state of furniture, bad, dirty; state of windows, 5 whole, 7 broken. Number of beds, 3; number of bedsteads, 1.

The beds and coverings were composed of rags and shavings.

The eldest girl is 16, and the 2 females above 20, are the blind man's wife and her sister.

*House, No. 4.—Two Parlours, on Ground Floor.*

Size of front room, 14 ft. long, 13 ft. broad, 6 ft. high; size of windows, 3 ft. 4 in. by 2 ft. 2 in. Size of back-room, 11 ft. 2 in. long, 9 ft. 4 in. broad, less than 6 feet in height; 1 window with 4 whole panes; rent paid, 5s. 6d. weekly for 2 rooms; under-rent paid, 3d. per night each adult; time occupied, 2 years; number of families, 5; comprising 4 males above 20, 9 females above 20, three of them single, 2 males under 20, 4 females under 20; total 19. Number of persons ill, 2; deaths in 1847, 1, measles. Country, Irish; trade, dealers and mendicants. State of rooms and furniture, bad, dirty; state of windows, 6 whole panes, and 10 broken. Number of beds, 6; number of bedsteads, 6.

The door of this room opens into the yard, 6 feet square, which is covered over with night soil; no privy, but there is a tub for the accommodation of the inmates; the tub was full of night soil. These are nightly lodging-rooms. In the front room one girl, 7 years old, lay dead, and another was in bed with its mother, ill of the measles.

*No. 4.—First Floor.*

Size of room, 17 ft. long, 13 ft. broad, 8 ft. high; size of window, 5 ft. 4 in. by 3 ft. 2 in.; rent paid, 3s. weekly; under-rent paid, —; time occupied, 1 month. Number of families, 4; consisting of 5 males above 20, 5 females above 20, 4 males under 20, 2 females under 20; total 16. Number of persons ill, 2, one man dying; deaths in 1847, —. Country, Irish; trade, mendicants and dealers. State of rooms, filthy; state of furniture, bad, dirty, only 1 table and 2 chairs; state of windows, 8 broken panes. Number of beds, 1 bed and a quantity of shavings; number of bedsteads, 1.

*Particulars of the above Families.*—1. Man, wife, and 2 children, pay 1s. per week; 2. Man and 1 daughter, 10d.; 3. Two females, single, 10d.; 4. Man, wife, and 3 children (landlord); 5. Man, wife, and 1 child, 1s.

Two of the single women were 25, and 1 of the boys was 18. Here were 16 persons with only one bedstead! The landlord covered his rent, and made 8d. weekly.

*No. 4.—Second Floor.*

Size of room, 17 ft. long, 13 ft. broad, 8 ft. high; size of windows, 5 ft. 4 in. by 3 ft. 8 in.; rent paid, 3s. weekly; under-rent paid, —; time occupied, 1 month. Number of families, 5, besides single persons; comprising 5 males above 20, 6 females above 20, 9 males under 20, 3 females under 20; total 23. Number of persons ill, fever, 1 man and 2 children; deaths in 1847, 1 child. Country, Irish; trade, beggars. State of rooms, filthy; state of furniture, bad, dirty, 1 old table, stool, and chair; state of windows, 8 broken, 4 whole panes. Beds of shavings and rags; no bedsteads.

*Particulars of the above Families.*—1. Man, 2 boys, and girl, (landlord); 2. Three boys, (sons of landlord); 3. Man, wife, and 1 boy,

1*s.* 2*d.* ; 4. Man, wife, and 4 children, 1*s.* 2*d.* ; 5. Man, wife, and 1 child, 10*d.* ; man, wife, and child, 10*d.* ; 1 single female, 6*d.* Profit on room, 1*s.* 6*d.*

Amongst the children was a girl of 18 and a boy of 13.  
Extreme wretchedness.

*No. 4.—Back Room on the Stairs.*

Size of room, 12 ft. long, 12 ft. broad, 5 ft. 6 in. high ; size of window, 3 ft. 9 in. by 2 ft. 11 in. ; rent paid 3*s.* weekly, furnished ; under-rent paid, — ; time occupied, 4 months. Number of families, 1 ; consisting of 1 male above 20, 1 female above 20, no males under 20, 1 female under 20 ; total 3. Number of persons ill, none ; deaths in 1847, —. Country, Irish, 19 years in London ; trade, market labourer. State of rooms, comparatively clean, state of furniture, decent ; state of windows, all whole. Number of beds, 2 ; number of bedsteads, 2.

The tenant makes his livelihood as a labourer in Covent-garden market. Although the members of the Committee could not stand upright in the room, it was on the whole decent, and comparatively comfortable.

*House, No. 5.—Two Parlours on Ground Floor.*

Size of front room, 14 ft. long, 13 ft. broad, 6 ft. high ; size of window, 5 ft. 4 in. by 3 ft. 8 in. ; rent paid, 5*s.* weekly, no lodgers ; under-rent paid, — ; time occupied, 8 months. Number of families, 1, and 1 single woman ; comprising 1 male above 20, 2 females above 20, 1 male under 20, no females under 20 ; total 4. Number of persons ill, 1, the wife ; deaths in 1847, —. Country, English ; trade, dealers. State of rooms, clean ; state of furniture, tidy ; state of windows, whole. Number of beds, 2 ; number of bedsteads, 2.

The drain from the yard runs through the passage superficially.

No privy and no water to the house.

*No. 5.—First Floor.*

Size of room, 17 ft. long, 13 ft. broad, 8 ft. high ; size of window, 2 ft. 4 in., two windows ; rent paid, 3*s.* weekly ; under-rent paid, — ; time occupied, —. Number of families, 2 ; comprising 2 males above 20, 2 females above 20, 4 males under 20, 6 females under 20 ; total 14. Number of persons ill, 4 of fever ; deaths in 1847, —. Country, — trade, —. State of rooms, bad ; state of furniture, bad ; state of windows, —. Number of beds, 3 ; number of bedsteads, 3.

*Particulars of the Families.*—1. Husband, wife, and 6 children, eldest girl 16 ; 2. Husband, wife, and 4 children, eldest boy 17 : they pay 1*s.* 6*d.*, and all sleep together.

*No. 5.—Back Room on Stairs.*

Size of room, 12 ft. long, 12 ft. broad, 5 ft. 6 in. high ; one small window ; rent paid, 2*s.* weekly ; under-rent paid, — ; time occupied, 6 weeks. Number of families, 2, and 2 single men ; consisting of 3 males above 20, 2 females above 20, 1 male under 20, 1 female under 20 ; total 7. Number of persons ill, — ; deaths in 1847, —. Country, Irish ; trade, mendicants. State of rooms, dirty ; state of furniture,

bad; state of windows, broken. Beds of rags and shavings; bedsteads, —.

No bedstead or furniture in this room, and the bedding consists of shavings and dirty rags.

The members of the Committee could not stand upright in the room, and its cubic contents were only 792 feet; room dark.

*No. 5.—Second Floor.*

Size of room, 17 ft. long, 13 ft. broad, 8 ft. high; two windows, size 5 ft. 4 in.; rent paid, 3s. weekly; under-rent paid, 1s. each family; time occupied, —. Number of families, 6; comprising 6 males above 20, 6 females above 20, 5 males under 20, 5 females under 20; total 22. Number of persons ill, 2 children of measles; deaths in 1847, —. Country, Irish; trade, dealers. State of rooms, dirty; state of furniture, bad, 1 table and 2 chairs; state of windows, broken. Number of beds, 1, all the rest rags; number of bedsteads, 1.

*Particulars of the above.*—1. Man, wife, and boy (landlord); 2. Man, wife, and 3 children, 1s.; 3. Man, wife, and 1 child, 1s.; 4. Man, wife, and 3 children, 1s.; 5. Man and wife, 1s.; 6. Man, wife, and 2 children, 1s.

The landlord in this room lives free, and clears 2s. weekly, but finds firing.

*House, No. 6.—Parlour,—One Room.*

Size of room, 17 ft. long, 13 ft. broad, 8 ft. high; size of window, 5 ft. 4 in. by 3 ft. 8 in.; rent paid, 3s. weekly; under-rent paid, —; time occupied, 3 years. Number of families, 1; comprising 1 male above 20, 2 females above 20, no males under 20, no females under 20; total 3. Number of persons ill, —; deaths in 1847, —. Country, Irish; trade, dealer. State of rooms, rather clean; state of furniture, fair; state of windows, fair. Number of beds, 2; number of bedsteads, 2.

This family consists of man, wife, and sister.

Although there is a comparative state of cleanliness and comfort, with lengthened occupancy, the family have neither privy nor water.

*No. 6.—First Floor.*

Size of room, 17 ft. long, 13 ft. broad, 8 ft. high; size of window, 5 ft. 4 in.; rent paid, 3s. weekly; under-rent paid, —; time occupied, 2 months. Number of families, 3; consisting of 1 male above 20, 3 females above 20, 2 males under 20, and 1 female under 20; total 7. Number of persons ill, —; deaths in 1847, —. Country, Irish; trade, dealers. State of rooms, dirty; state of furniture, dirty; state of window, 11 panes remaining. Number of beds, 3; number of bedsteads, 2.

The family consists of husband, wife, and 4 children, and a widow woman who pays 3d. per night. No privy nor water.

*No. 6.—Second Floor.*

Size of room, 17 ft. long, 13 ft. broad, 8 ft. high; size of window, 5 ft. by 4 ft. 3 in.; rent paid, 3s. weekly, under-rent paid, —; time occupied, —. Number of families, 2, and 3 single men; consisting of

4 males above 20, 5 females above 20, 2 males under 20, and 1 female under 20; total 12. Number of persons ill, —; deaths in 1847, —. Country, Irish; trade, dealers. State of rooms, dirty; state of furniture, bad; state of windows, broken. Number of beds, 3; number of bedsteads, —.

*Particulars of Families.*—1. Widow and 4 children; son 19, daughters 20, 22, and 24; 2. Husband, wife, and 2 children; pay 1s. 6d.; 3 single men, pay 1s.; 2 have resided 2 months. Great wretchedness. No bedstead. Single men and single women herded together.

*No. 6.—First Room on Stairs, Back of House.*

Size of room, 10 ft. 3 in. long, 9 ft. 10 in. broad, 6 ft. 8 in. high; size of window, 3 ft. 6 in. by 4 ft.; rent paid, 2s. weekly; under-rent paid, 2s.; time occupied, 1 month. Number of families, 1; comprising 1 male above 20, 1 female above 20, 1 male under 20, and 1 female under 20; total 4. Number of persons ill, —; deaths in 1847, —. Country, Irish; trade, mat-makers. State of room, tidy; state of furniture, bad; state of window, 27 whole panes, 3 broken. Number of beds, 1; number of bedsteads, 1.

*No. 6.—Second Room on Stairs at Back of House.*

Size of room, 13 ft. long, 11 ft. 7 in. broad, 7 ft. high; size of window, 3 ft. 4 in. by 2 ft. 2 in.; rent paid, 2s. 3d. weekly, furnished; under-rent paid, —; time occupied, —. Number of families, 1; comprising 1 male above 20, 2 females above 20, 2 males under 20, and 1 female under 20; total 6. Number of persons ill, —; deaths in 1847, —. Country, Irish; trade, dealers. State of rooms, dirty; State of furniture, bad; state of windows, broken. Number of beds, 2; number of bedsteads, 2.

Of these 6 persons in a closet, occupying 2 beds, one daughter was 24 years old and one son 20; the closet having 1054 cubic feet of air.

*Thursday, 30th December, 1847.*

Present—Colonel Sykes and F. G. P. Neison, Esq., and the Agent.

The Committee proceeded to inspect the house next in order.

*House, No. 7.—Two Parlours on Ground-Floor.*

Size of 1st room, 14 ft. 6 in. long, 13 ft. broad, 6 ft. 3 in. high; size of windows, —; rent paid, 5s. weekly for two rooms; time occupied, 4 months. Number of families, 3, and two single men; comprising 7 males above 20, 5 females above 20, 7 males under 20, 3 females under 20; total 22. Number of persons ill, 1; deaths in 1847, —. Country, Irish; trade, dealers. State of rooms, dirty; state of furniture, bad; state of windows, broken and quite open. Number of beds, 7; number of bedsteads, 4.

The landlord has been 4 months here, but 5 years at No. 21.

This is a common lodging-room, but nightly lodgers *not taken in*. No privy or water.

*Particulars of the Families.*—In the front room, 1. Man and wife and 9 children, three grown up; 2. Man and wife, pay 1s. 3d.; 3. Man and wife, pay 1s.; 4. Single woman, pays 1s.; total 16; 2 bedsteads.

In the back closet, 11 feet square, 2 men and their wives, and two single men, who pay 2s.; total 6; 2 bedsteads only.

The population in these two rooms herd together like brutes.

*No. 7.—Rooms in Yard.*

Size of rooms, 12 ft. long, 11 ft. broad, 6 ft. high; size of window, 2 ft. 10 in. by 2 ft. 2 in.; rent paid, 2s. weekly; under-rent paid, —; time occupied, —. Number of families, 1, and a single female; comprising 1 male above 20, 1 female above 20, 4 males under 20; total 6. Number of persons ill, 1; deaths in 1847, —. Country, Irish; trade, paper-maker. State of rooms, dirty; state of furniture; bad; state of windows, 7 whole, 6 broken. Number of beds, 2, number of bedsteads, 1.

Another small room in this yard, empty. Rooms built of wood; filthy. No privy or water.

*No. 7.—First Floor.*

Size of room, 14 ft. 6 in. long; 13 ft. broad, 6 ft. 5 in. high; size of window, 5 ft. 4 in. by 3 ft. 3 in.; rent paid, 3s. weekly; under-rent paid, —; time occupied, 9 years. Number of families, 1; comprising 1 male above 20, 2 females above 20, 3 males under 20, females under 20, none; total 6. Number of persons ill, 1, cold; deaths in 1847, —. Country, Irish; trade, labourers. State of rooms, tidy; state of furniture, bad; state of windows, 11 panes whole, 5 blocked up. Number of beds, 2; number of bedsteads, 2.

The daughter, 15 years of age, takes out about 5s. worth of oranges (200) daily; and supposing she sold the whole, at rates averaging from 2 to 3 a penny, which she rarely does, she makes 1s. 6d., or 9s. a week.

*No. 7.—Second Floor.*

Size of room, 14 ft. 6 in. long, 31 ft. broad, 6 ft. 5 in. high; size of window, 5 ft. 4 in. by 3 ft. 3 in.; rent paid, 3s. weekly; under-rent paid, 1s. 6d.; time occupied, 3 years. Number of families 2, and 2 boys, of 16 and 17; comprising 2 males above 20, 2 females above 20, 6 males under 20, 2 females under 20; total 12. Number of persons ill, —; deaths in 1847, —. Country, Irish; trade, shoemaker, works at home. State of rooms, tidy; state of furniture, tidy; state of windows, 12 whole, 4 broken. Number of beds, 5; number of bedsteads, 5.

The landlord of this room has been 27 years in the parish.

*Particulars of the Families.*—1. Husband and wife and 4 children, a girl of 14; 2. Husband and wife and 2 children; 3. Two lads of 17 and 16, unconnected with the families, who pay for their bed between them 1s. 6d. weekly, and calculate that they earn 1s. daily, as market-porters.

*No. 7.—Back Room, No. 1, First Floor.*

Size of room, 11 ft. 2 in. long, 9 ft. 4 in. broad, 6 ft. high; size of windows, 2 ft. 10 in. by 2 ft. 3 in.; rent paid, 2s. weekly; under rent paid, —; time occupied, 7 months. Number of families, 1; comprising 1 male above 20, 1 female above 20, 2 males under 20; total 4.

Number of persons ill, 1; deaths in 1847, 1, fever. Country, Irish; trade, mendicants. State of rooms, dirty; state of furniture, bad; state of windows, broken. Beds of shavings; number of bedsteads, 1.

The whole of this family were in the workhouse some time since with the fever. A daughter died three weeks ago from fever, and the mother was ill of fever. The family has been 16 years in this street. All looking wretched.

*No. 7.—Back Room, No. 2,\* First Floor.*

Size of room, 11 ft. 2 in. long, 9 ft. 4 in. broad, 6 ft. high; size of window, 3 ft. by 2 ft.; rent paid, 2s. weekly; under-rent paid, 1s. each family; time occupied, 3 weeks. Number of families, 2; comprising 2 males above 20, 2 females above 20, 4 males under 20, 4 females under 20; total 12. Number of persons ill, 3 of fever; deaths in 1847, 1, bowel complaint. Country, Irish; trade, labourer. State of rooms, dirty; state of furniture, bad; state of windows broken. Two bundles of rags for beds; no bedsteads.

The inmates of this room nearly naked; the only things in this room, a few rags and shavings; 4 years from Ireland. Nothing could exceed their squalid misery.

The passage leading to these two rooms is 11 ft. long by 2 ft. 3 in. wide.

*House, No. 8.—Parlour on Ground-Floor, One Room.*

Size of room, 14 ft. 6 in. long, 13 ft. broad, 6 ft. 5 in. high; size of window, 5 ft. 4 in. by 3 ft. 3 in.; rent paid, 4s. weekly, furnished; under-rent paid, 2s. 3d.; time occupied, 4 months. Number of families, 2; comprising 2 males above 20, 2 females above 20, 2 females under 20; total 6. Number of persons ill, —; deaths in 1847, —. Country, Irish; trade, labourer. State of room, clean; state of furniture, tidy; state of windows, whole. Number of beds, 2; number of bedsteads, 1.

Mr. Mason, of the public-house, is landlord of this house, and the tenants must go to his yard opposite to the privy, and are obliged to him for water.

The chief tenant, although only 4 months in this room, has been 14 years in this street.

The families consist of 1. A man and wife and 2 girls. and 2. A man and wife. Only 1 bedstead.

These people say that there is always much fever in the street.

*No. 8.—First Floor.*

Size of room, 14 ft. 6 in. long, 13 ft. broad, 6 ft. 6 in. high; size of window, 5 ft. 4 in. by 3 ft. 3 in.; rent paid, 4s. 6d. weekly, furnished; under-rent paid, 1s. 6d.; time occupied, 6 months. Number of families 2; comprising 2 males above 20, 3 females above 20, 4 males under 20, 1 female under 20; total 10. Number of persons ill, 2, fever; deaths in 1847, —. Country, Irish; trade, dealer. State of rooms, dirty; state of furniture, dirty; state of windows, broken. Number of beds, 3; number of bedsteads, 3.

No doubt these persons take other lodgers, as this is a lodging-house.

*Particulars of the Families.*—1. Husband, wife, and 4 children; a daughter of 21. 2. Husband, wife, and 2 children. A son, aged 19, was lying in a dying state.

*No. 8.—Second Floor.*

Size of room, 14 ft. 8 in. long, 13 ft. broad, 6 ft. 5 in. high; size of window, 5 ft. 4 in. by 3 ft. 3 in.; rent paid, 3*s.* weekly; under-rent paid, 1*s.* 6*d.*; time occupied, 8 years. Number of families, 2, and 1 single man; comprising 3 males above 20, 2 females above 20, 3 males under 20, 1 female under 20; total 9. Number of persons ill, 1, disease of lungs; deaths in 1847, 1. Country, Irish; trade, mat-makers. State of rooms, dirty; state of furniture, bad; state of windows, broken. Number of beds, 2; number of bedsteads, 1.

One family, consisting of husband and wife, has been 8 years in this room.

The other family consists of husband, wife, and 3 children, and the husband was dying of disease of the lungs.

A single man lived with these two families.

*No. 8.—Back Rooms in Yard.*

*No. 1.*—Size of room, 11 ft. 2 in. long, 9 ft. broad, 5 ft. 6 in. high; size of window, 2 ft. 10 in. by 2 ft. 3 in.; rent paid, 3*s.* 6*d.* weekly, furnished; under-rent paid, —; time occupied, 1 week. Number of families, 1; consisting of 1 female above 20, 1 female under 20; total 2. Number of persons ill, —; deaths in 1847, —. Country, —; trade, —. State of room, dirty; state of furniture, dirty; state of windows, broken. Number of beds, 1; number of bedsteads, 1.

This female, an educated person, aged 40, now apparently an unfortunate female, stated that she was the wife of a commercial traveller, and she came here to hide herself from her friends. Her daughter, 14.

*No. 2.*—Rent 3*s.* 6*d.* furnished: occupied by two unfortunate females.

*No. 3.*—Rent 3*s.* 6*d.* furnished; occupied by 1 female, and a man, wife, and son, aged 18, sick, with only one bed. They are Irish, and have been 10 years in the street.

*No. 4.*—Husband and wife, pay 3*s.* 6*d.*

*No. 8.—Third Floor.*

Size of room, 14 ft. 6 in. long, 13 ft. broad, 6 ft. 5 in. high; size of window, 5 ft. 4 in. by 3 ft. 3 in.; rent paid, 3*s.* weekly; under-rent paid, 9*d.*; time occupied, 10 weeks. Number of families, 3; consisting of 3 males above 20, 5 females above 20, 3 males under 20, 3 females under 20; total 14. Number of persons ill, 3; deaths in 1847, —. Country, Irish; trade, dealers. State of room, dirty; state of furniture dirty, 1 table, 1 chair; state of windows, broken. Beds of shavings and rags; number of bedsteads, none.

The families consist of, 1. Mother and 7 children, girl aged 20; 2. Husband and wife; 3. Husband, wife, and 2 sons, one aged 20.

The widowed mother and 2 children sick.

Extreme wretchedness.

*House, No. 9.—Ground Floor.*

Size of rooms, 14 ft. 6 in. long, 13 ft. broad, 6 ft. 6 in. high; size of windows, 5 ft. 4 in. by 3 ft. 3 in.; rent paid, 4s. 6d. weekly, furnished; under-rent paid, —; time occupied, 6 months. Number of families, 1; consisting of 2 males above 20, 2 females above 20, 3 males under 20, 2 females under 20; total 9. Number of persons ill—all; deaths in 1847, 1. Country, Irish; trade, mat-makers. State of rooms, dirty; state of furniture, bad—no chair, 2 stools; state of windows, broken. Number of beds, 2; number of bedsteads, 2.

The family consists of man, wife, and 7 children.

Here were nine human beings, including a grown up girl and a boy of 14, sleeping in two beds.

There were no lodgers.

*No. 9.—Second Floor.*

Size of room, 14 ft. 6 in. long, 13 ft. broad, 6 ft. 6 in. high; size of window, 5 ft. 4 in. by 3 ft. 3 in.; rent paid, 4s. 6d. weekly, furnished; under-rent paid, 1s. 6d.; time occupied, 4 months. Number of families, 2, and a single man; comprising 2 males above 20, 2 females above 20, 3 males under 20, 1 female under 20; total 8. Number of persons ill, 1 child; deaths in 1847, —. Country, Irish; trade, mat-makers. State of rooms, dirty; state of furniture, bad,—1 table, 1 chair, 3 forms; state of windows, broken. Number of beds, 2; number of bedsteads, 2.

*Particulars of the Families.*—1. Husband, wife, and 3 children; 2. Widow and 1 child; 3. One single man pays 1s. 6d. weekly.

*No. 9.—Third Floor.*

Size of room, 14 ft. 6 in. long, 13 ft. broad, 6 ft. 5 in. high; size of window, 4 ft. 4 in. by 3 ft. 3 in.; rent paid, 4s. weekly, furnished; under-rent paid, —; time occupied, 6 years. Number of families, 1; consisting of 1 male above 20, 1 female above 20, 4 males under 20, 3 females under 20; total 9. Number of persons ill, 1; deaths in 1847, —. Country, English; trade, cutler and hawker. State of rooms, clean; state of furniture, clean; state of windows, clean. Number of beds, 2; number of bedsteads, 2.

This family consisted of husband, wife, and 7 children, English, the eldest girl 16. The man made razor-strops and hawked them. They had all taken the temperance pledge, and in spite of their poverty, they, their room and furniture, exhibited a marked contrast to the Irish tenants of other rooms. The mother had not had good health for 16 months.

No privy and no water. The mother obliged to take her infants over to the privy at the public-house and remain with them, because the Irish children beat them. The landlord, when Rogers (the tenant) paid his rent, always offered him a pint of beer, which he did not take.

*House, No. 10.—Second Floor, Three Rooms.*

First floor rooms locked up.

1st room.—Size, 9 ft. long, 6 ft. broad, 6 ft. high; size of windows, small; rent paid, 3s. 6d. weekly, furnished; under-rent paid, —;

time occupied, 6 weeks. Number of families 1; consisting of 1 male above 20, 1 female above 20; total 2. Number of persons ill. 1 with fever and influenza; deaths in 1847, —. Country, man English, woman Irish; trade, dealer, make a living by selling shell pin-cushions. State of rooms, dirty; state of furniture, bad; state of windows, fair. Number of beds, 1; number of bedsteads, 1.

They have lost 10 children in the last 17 years, 9 of whom are lying in the neighbouring churchyard of St. Giles's, and 1 in a city parish. They all died young, and this affords a melancholy proof of the tenure of infantine life in this locality.

The ground-floor of this house, a huckster's shop.

2nd room.—Size, 13 ft. 7 in. long, 8 ft. broad; size of window, 2 ft. 10 in. by 2 ft. 3 in.; rent paid, 2s. 3d. weekly, furnished; under-rent paid, boy 9d. per week; a family 1s. 3d.; time occupied, 1 month. Number of families, 2; consisting of 3 males above 20, 2 females above 20, 1 male under 20, 5 females under 20; total 11. Number of persons ill—all, bad eyes; deaths in 1847, —. Country, Irish; trade, mendicants. State of rooms, dirty; state of furniture, dirty; state of window, broken. Beds, of shavings; no bedstead.

3rd room.—Empty.

Families as follows:—1. Husband, wife, and 3 children, son 22; 2. Husband, wife, and 3 children, boy 11.

The upper or third floors, empty.

#### *House, No. 11.—A Lodging House.*

This house, with 4 others adjoining, consisting of 30 rooms, is rented by one individual, an Englishman; 25 of the rooms are let out furnished to separate families, at 6d. and 7d. per night each; and 5 of the rooms, in which are 20 beds, let to males at 3d. per night; there is also a day room for the use of the night lodgers, with a good fire and cooking utensils. These houses have also a good supply of water from a pump, and other accommodations.

The landlord has occupied it for 12 years.

#### *House, No. 14.—Two Parlours on Ground Floor.*

Occupied by the Irish landlady of the house and one family; consisting of 3 males above 20, 2 females above 20, and 1 female under 20; total 6. Rent £36 yearly.

These rooms are well furnished and clean, and the landlady is supposed to obtain her living by letting the other parts of the house furnished, and by letting out crockery and pictures; some of the engravings were old and valuable.

There are 7 rooms and a kitchen, but no water or privy.

The landlady calls herself a widow

#### *No. 14.—First Floor, Front Room.*

Size of room, 9 ft. long, 7 ft. broad, 6 ft. 5 in. high; size of window, 5 ft. by 3 ft. 3 in.; rent paid, 4s. weekly, furnished; under-rent paid, —; time occupied, 3 months. Number of families, 1; consisting of 2 males above 20, 1 female above 20, 1 male under 20, and 1 female under 20; total 5. Number of persons ill. none; deaths in 1847, —; Country, English; trade, dealers. State of rooms, very clean;

state of furniture, good, a remarkable quantity of china; state of window, whole.

Number of beds, 2; number of bedsteads, 2.

*No. 14.—First Floor, Back Room.*

Size of room, 7 ft. long, 9 ft. broad, 6 ft. 5 in. high; rent, 3s. furnished; family 1, English; consisting of mother and 3 daughters; 1 bed and bedstead, very clean; two females above 20, and 2 under 20; total 4. Room very close.

*No. 14.—Second Floor, Front.*

Size of room, 9 ft. long, 7 ft. broad; size of window, 5 ft. by 3 ft. 3 in.; rent paid, 3s. weekly, unfurnished; under-rent paid, —; time occupied, 12 months. Number of families, 1; consisting of 1 male above 20, 1 female above 20, no male under 20, and 1 female under 20; total 3. Number of persons ill, —; deaths in 1847, —. Country, English; trade, dealer. State of rooms, clean; state of furniture, good, clean; state of window, whole. Number of beds, 1; number of bedsteads, 1.

Second floor back, size 10 ft. long, 7 ft. broad; rent 2s. 6d. furnished; 1 man above 20. Country, English; trade, dealer.

A solitary case of single occupancy.

*No. 17.—First Room, in Back Yard of House, No. 18.*

Size of room, 10 ft. long, 7 ft. broad, 6 ft. 5 in. high; size of window, 3 ft. by 2 ft. 6 in.; rent paid, 1s. 6d. weekly, furnished; under-rent paid, —; time occupied, 2 years. Number of families, 1; consisting of 1 male above 20, 1 female above 20, no male under 20, and 1 female under 20; total 3. Number of persons ill, —; deaths in 1847, —. Country, English; trade, grinder. State of rooms, dirty; state of furniture, dirty, bad; state of window, broken.

No bed or bedstead and no table.

*No. 17.—Second Room.*

Size of room, 10 ft. long, 7 ft. broad, 5 ft. 6 in. high; size of window, 3 ft. by 2 ft. 6 in.; rent paid, 3s. weekly, furnished; under-rent paid, —; time occupied, 12 months. Number of families, 1; consisting of 1 male above 20, 1 female above 20, 1 male under 20, and no female under 20; total 3. Number of persons ill, —; deaths in 1847, —. Country, English; trade, sweep. State of rooms, dirty; state of furniture, bad, dirty; state of window, broken. Number of beds, 1; number of bedsteads, 1 broken.

They sleep in their soot-cloths. A mere closet.

*No. 17.—Third Room, in Yard behind House, No. 18.*

Size of room, 15 ft. long, 14 ft. broad, 6 ft. high; size of window, 3 ft. by 2 ft. 6 in.; rent paid, 3s. 6d. furnished. Occupied 16 months by one family, consisting of 1 male above 20, 2 females above 20, 1 male under 20, and 2 females under 20; total 6. Persons ill, 1. Country, English; trade, dealers. Beds, 2; bedstead, 1, 2 chairs, and 1 deal table.

The family consists of a mother and 4 children; girl 23, boy 20, and two grandchildren.

*No. 17.—Fourth Room.*

Size of room, 12 ft. long, 8 ft. broad, 5 ft. 6 in. high; rent, 1s. 9d. furnished; under-rent, 6d. Occupied 6 years by one family and 3 widows; 1 male above 20, 4 females above 20, and 1 male under 20; total 6. Bedsteads, 1; beds, 3, very dirty.

Three widows, a single woman, one son grown up, and a girl, 14, huddled together. A tall man could not stand upright in the room.

*No. 17.—Fifth Room, Back of House, No. 18.*

Size of room, 10 ft. long, 7 ft. broad, 6 ft. high; size of window, 3 ft. 6 in. by 2 ft. 6 in.; rent paid, 3s. 3d. furnished, weekly; under-rent, 1s.; time occupied, 5 years. Occupants consist of, 1. A husband, wife, and 2 children; 2. Wife's mother; 3. One single female, the landlady, and a son above 20 years of age; total 7.

The whole of the furniture consists of 1 table, 2 chairs, 2 bedsteads, and 2 beds, very dirty.

*No. 17.—Sixth Room, joining on to the House, No. 20.*

Size of room, 10 ft. long, 7 ft. broad, 5 ft. 6 in. high; size of window, 3 ft. 6 in. by 2 ft. 6 in.; rent, 2s.; cannot stand up in room; by one family occupied 1 year and 9 months; consisting of 1 male above 20, 1 female above 20, and 1 female under 20; total 3; room in a shocking state.

No privy or water to the house and rooms of No. 17.

*House, No. 18.—Parlour on Ground Floor.*

Size of room, 15 ft. long, 13 ft. broad, 6 ft. 6 in. high; size of window, 5 ft. 5 in. by 3 ft. 4 in.; rent 2s. Families, 1, and 2 females; occupied 7 years; under rent, 10d. and 6d. per week. Country, 1 Irish and 2 English.

No water or privy.

*No. 18.—First Floor.*

Size of room, 14 ft. long, 14 ft. broad, 6 ft. 6 in. high; size of window, 5 ft. 4 in. by 3 ft. 3 in.; rent, 3s. 6d. furnished; occupied 4 years. One family; consisting of 1 male above 20, 1 female above 20, 1 male under 20, and 1 female under 20; total 4. Country, English; trade, dealer, bird fancier.

There were 7 birds in the room; bed and bedsteads, 2; room clean.

*No. 18.—Back Room, First Floor.*

Size of room, 14 ft. long, 14 ft. broad, 6 ft. high; size of windows, 5 ft. 4 in. by 3 ft. 3 in.; rent, 3s. 6d. furnished. Occupied by 2 females above 20, mendicants; total 2.

*No. 18.—Second Floor.*

Size of room, 14 ft. long, 14 ft. broad, 6 ft. 6 in. high; size of window, 5 ft. 6 in. by 3 ft. 3 in.; rent, 3s. 3d. furnished. One family; consisting of 1 male above 20, 2 females above 20; total 3. Persons ill, 1. Country, English; trade, cattle-drover. Beds, 1; bedsteads, 1; room, clean.

No. 18.—*Back Room, Second Floor.*

Size of room, 13 ft. long, 13 ft. broad; rent, 4s. furnished. One family; consisting of 1 male above 20, 1 female above 20, 1 male under 20, and 2 females under 20; total 5. Country, English; cattle-drover; 2 bedsteads and beds; room clean.

List of furniture allowed by the landlords to a furnished room:—1 deal table, 2 deal chairs, 1 bedstead without hangings, &c., 1 flock bed, 2 old blankets, 1 pair coarse sheets, 1 bolster, 1 quilt, 1 iron pot, 1 tea-kettle, 1 saucepan, and 1 pail.

The Committee did not think it necessary to proceed beyond the eighteenth house, as it would have lengthened the Report very inconveniently; moreover, the houses inspected afforded a just character of the street and its tenants. Nos. 12 and 13 corresponded to No. 11, a common lodging-house, under individual management; it was not, therefore, thought necessary to examine them in detail.

A few words may be said with respect to the OCCUPATION AND CHARACTER of the inhabitants residing in the district visited. They may be classed as follows:—

1st.—Shop-keepers, lodging-house-keepers, publicans, and some of the under-landlords of the houses, who make considerable profit by letting the rooms furnished and unfurnished.

2nd.—Street-dealers in fruit, vegetables, damaged provisions, and sundries, sweeps, knife-grinders, and door-mat makers.

3rd.—Mendicants, crossing-sweepers, street-singers, persons who obtain a precarious subsistence, and country tramps.

4th.—Persons calling themselves dealers, who are probably thieves, and the occupants of houses of ill fame.

5th.—Young men and lads, of ages varying from 11 to 30, known as pickpockets and thieves of various degrees.

About one-half of the inhabitants are Irish, chiefly natives of Cork, who, for the most part, have been long resident in London. About one-eighth are of Irish descent, born in England; the remainder consist of English, some of whom have been in better circumstances.

The opening of New Oxford Street has displaced many persons, who have had to find lodging elsewhere. To what extent this may have led to the over-crowding of Church Lane may be judged from facts detailed in the appended paper by Mr. Mann, which will also exhibit the sanitary state of this street. In reference to this subject it should be borne in mind that the Committee found several rooms untenanted in Church Lane.

*January 17th, 1848.*

Present—Colonel Sykes and the Agent.

The Committee took a general view of the street, and found it strewed from end to end with night soil, sweepings of houses, decayed vegetables, &c. Carrier Street, which is a *cul de sac*, runs at a right angle from near the centre of Church Lane; it terminates in a bulk-head against the backs of the new houses in Oxford Street: upon an open space in front of this bulk-head, and opposite the doors of the dwelling-houses, the inhabitants ease themselves night and day, and on

this spot all kind of filth is thrown, the accumulations not being removed. Church Lane has not any sewer; the sewer of George Street sends off into Church Lane a ramification at right angles, which terminates within a few feet opposite the door of No. 1, Church Lane, and the landlady complains, that this trunk periodically chokes up, and inundates her cellar.

Your Committee have thus given a picture in detail of human wretchedness, filth, and brutal degradation, the chief features of which are a disgrace to a civilized country, and which your Committee have reason to fear, from letters that have appeared in the public journals, is but the type of the miserable condition of masses of the community, whether located in the small, ill-ventilated rooms of manufacturing towns, or in many of the cottages of the agricultural peasantry. In these wretched dwellings all ages and both sexes, fathers and daughters, mothers and sons, grown up brothers and sisters, stranger-adult males and females, and swarms of children, the sick, the dying, and the dead, are herded together with a proximity and mutual pressure which brutes would resist; where it is physically impossible to preserve the ordinary decencies of life; where all sense of propriety and self respect must be lost, to be replaced only by a recklessness of demeanour which necessarily results from vitiated minds; and yet with many of the young, brought up in such hot-beds of mental pestilence, the hopeless, but benevolent, attempt is making to implant, by means of general education the seeds of religion, virtue, truth, order, industry, and cleanliness; but which seeds, to fructify advantageously, need, it is to be feared, a soil far less rank than can be found in these wretched abodes. Tender minds, once vitiated, present almost insuperable difficulties to reformation; bad habits and depraved feelings gather with the growth and strengthen with the strength. It is not properly within the province of your Committee to offer suggestions, but they cannot refrain from expressing their belief, that the surest way to improve the physical and moral condition of the labouring classes, and to give education a fair field, is for wealthy and benevolent individuals throughout the country, to form local associations, and by the aid of Parliament, to possess themselves of all such buildings as we have described, whether the house in the town, or the cottage in the country; to rebuild suitable roomy dwellings, properly drained, ventilated, and supplied with water, and to rent them so *CHEAP* to the poor, that they shall have no excuse for herding together like animals. In this way the great evils of over-crowding may be remedied for that large class of our labouring population which is prepared to adopt habits of cleanliness and decency: but nothing short of compulsory legislation can meet the case of the low lodging-houses and rooms sub-let after the manner of those described in this Report.

Nothing can be conceived more mischievous than the system of sub-letting in almost universal operation in the houses inspected by your Committee. The owner of the property lets his houses to a sub-landlord, this sub-landlord lets his rooms to individual tenants, and these tenants lett off the sides or corners of the rooms to individuals or families. Cheap houses will go far to give the death-blow to this fatal system; and to build cheap houses, deserving of the name, appears to your Committee a work of preventive charity worthy of all encouragement.

## Abstract of Report of Committee.

No. of House.	No. of Room.	Cubic Contents.	Occupants.				Total.	No. of Families.	Number of Bedsteads.	Remarks.	Cubic Feet of Air to each Person.
			Males above 20.	Females above 20.	Males under 20.	Females under 20.					
2	Ground, 1 and 2 ....	{ 1,692 815 }	8	5	4	5	22	3	6		86
"	Cellar .....	..	1	3	4	3	11	1	..		..
"	1st floor .....	1,985	3	3	4	6	16	3	3		124
"	2nd floor .....	1,823	3	12	3	4	12	2	2		152
3	Ground, 1 and 2 ....	{ 1,925 140 }	5	5	3	4	17	4	5		121
"	1st floor .....	1,989	3	5	5	4	17	4	1		117
"	2nd floor .....	1,989	1	1	3	3	8	1	2		248
"	1, back .....	625	1	2	2	2	7	1	1		89
4	Ground, 1 and 2 ....	{ 1,092 681 }	4	9	2	4	19	5	6		93
"	1st floor .....	1,768	5	5	4	2	16	4	1		111
"	2nd floor .....	1,768	5	6	9	3	23	5	None.	Chiefly Irish.	77
"	1, back .....	792	1	1	..	1	3	1	2		264
5	Ground, 1 and 2 ....	1,092	1	2	1	..	4	1	2		273
"	1st floor .....	1,768	2	2	4	6	14	2	3		125
"	1, back .....	792	3	2	1	1	7	2	None.		113
"	2nd floor .....	1,768	6	6	5	5	22	6	1		80
6	Ground, 1 .....	1,768	1	2	..	..	3	1	2		589
"	1st floor .....	1,768	1	3	2	1	7	3	2		252
"	2nd floor .....	1,768	4	5	2	1	12	2	None.		147
"	1, back .....	672	1	1	1	1	4	1	1		168
"	2, back .....	1,054	1	2	2	1	6	1	2		176
7	Ground, 1 .....	1,178	7	5	7	3	22	3	4		54
"	1st floor .....	1,200	1	2	3	..	6	1	2		202
"	1, back yard .....	792	1	1	4	..	6	1	1		132
"	2nd floor .....	1,210	2	2	6	2	12	2	5		101
"	1, back .....	625	1	1	2	..	4	1	1		156
"	2, back .....	625	2	2	4	4	12	2	None.	One room empty.	52
8	Ground, 1 .....	1,210	2	2	..	2	6	2	1		202
"	1st floor .....	1,225	2	3	4	1	10	2	3		123
"	2nd floor .....	1,223	3	2	3	1	9	2	1		136
"	1, back yard .....	268	..	1	..	1	2	1	1		134
"	2, back yard .....	1,210	..	2	..	..	2	1	1		605
"	3, back room, yard..	..	1	1	1	..	3	1	1		..
"	4, back room, yard..	..	1	1	..	..	2	1	1		..
"	3rd floor .....	1,210	3	5	3	3	14	3	None.		86
9	Ground, 1 .....	1,210	2	2	3	2	9	1	2		134
"	2nd floor .....	1,210	2	2	3	1	8	2	2		151
"	3rd floor .....	1,210	1	1	4	3	9	1	2		134
10	2nd floor .....	324	1	1	..	..	2	1	1		162
"	2nd floor, 2nd room	652	3	2	1	5	11	2	None.	4 rooms empty in this house.	59
11, 12 & 13	{ A lodging-house, } { 30 rooms .....	..	..	..	..	..	..	..	..	Nightly Lodgers.	..
14	Ground, 1 and 2 ....	..	3	2	1	..	6	1	2	E	..
"	1st floor, front .....	419	2	1	1	1	5	1	2	E	84
"	1st floor, back .....	404	..	2	..	2	4	1	1	E	101
"	2nd floor, front .....	404	1	1	..	1	3	1	1	E	135
"	2nd floor, back .....	449	1	..	..	1	1	1	1	E	378
17	Back yard .....	449	1	1	..	1	3	1	None.	E. Grinder.	150
"	Ditto, 2, room .....	385	1	1	1	..	3	1	{ broken }	E. Sweep.	128
"	Ditto, 3, back .....	1,320	1	2	1	2	6	1	1		220
"	Ditto, 4, back .....	480	1	4	..	1	6	1	1		80
"	Ditto, 5, back .....	420	2	3	..	1	7	2	2		60
"	Ditto, 6, room .....	420	1	1	1	..	3	1	1		140
18	Ground, 1 .....	1,268	..	3	..	..	3	1	1		423
"	1st floor .....	1,274	1	1	1	1	4	1	2	E	318
"	1st, back .....	1,176	..	2	..	..	2	1	1	E	588
"	2nd floor .....	..	1	2	..	..	3	1	1	E	..
"	2nd floor, 2nd room	..	1	1	1	2	5	1	2	E	..
Total .....			111	138	117	97	463	100	90		

E. means English.

1000 cubic feet of air being deemed necessary for a single prisoner in England, and 800 cubic feet for a soldier in a barrack in India, it will be seen how miserably deficient the supply of air is to the inhabitants of these houses. The average supply is as nearly as possible 175 cubic feet of air, the largest 605, and the smallest 52.

*Statement of the Mortality prevailing in Church Lane during the last Ten Years, with the Sickness during the last Seven Months. Contained in a Letter addressed to Dr. Guy. By HORACE MANN, Esq., Barrister-at-Law.*

*February 1st, 1848.*

SIR,—Understanding that the Council of the Statistical Society have directed an investigation into the sanitary condition of Church Lane, in the Northern District of St. Giles in the Fields; and having myself, some months since, for my private satisfaction, made various inquiries and collected a few facts relating to the health of that locality; I have much pleasure in laying before the Council some of the results to which I have arrived, in order that they may make such use of them as may seem proper. My own inquiry embraced the whole of the North District of St. Giles, and more particularly Church Lane, Church Street, Clark's Buildings, Carrier Street, Crown Street, Monmouth Street, New Compton Street, and High Street; but I propose to confine this communication to Church Lane, except where a reference to other localities may appear, for the sake of comparison, desirable; reserving for some future occasion any remarks I may have to make upon the condition of the remainder of the above-named streets.

### *Population.*

Church Lane, according to the Census enumeration of 1841, contained, in that year, 655 inhabitants unequally distributed among 27 houses; the population of which, severally, was then as follows:—

		Brought forward....	244			Brought forward	391
No. 1 .....	39	No. 10.....	17	No. 20 .....	38		
„ 2 .....	33	„ 11.....	9	„ 21 .....	17		
„ 3 .....	14	„ 12.....	8	„ 22 .....	32		
„ 4 .....	27	„ 13.....	20	„ 23 .....	49		
„ 5 .....	35	„ 14.....	17	„ 24 .....	42		
„ 6 .....	29	„ 15.....	17	„ 25 .....	31		
„ 7 .....	29	„ 16.....	21	„ 26 .....	20		
„ 8 .....	13	„ 17.....	12	„ 27 .....	25		
„ 9 .....	25	„ 18.....	26	„ 28 .....	10		
Carried forward....		244	Carried forward....	391	Total .....	655	

giving an average of rather more than 24 persons to each house.

I find, however, on glancing at the enumeration recently made under the sanction of your Society, that, at some period or other since 1841, the population of this Lane has greatly increased. This will be shown by a comparative statement of the number of inhabitants, in 1841 and 1847 respectively, in each of 12 houses investigated by the Society.

Taking the increase in the following 12 houses together as indicating the probable ratio of increase in the whole 27, the population in 1841 (655), would, in 1847, have increased to 1095; the ratio being 67 per cent.; and giving an average of more than 40 persons to each house, instead of 24 as in 1841.

	1841	1847
No. 2.....	33	61
„ 3.....	14	49
„ 4.....	27	61
„ 5.....	35	47
„ 6.....	29	32
„ 7.....	29	62
„ 8.....	13	48
„ 9.....	25	26
„ 10.....	17	13
„ 14.....	17	19
„ 17.....	12	28
„ 18.....	26	17
	277	463—increase 186

The causes of this vast increase appear to me attributable to two distinct facts, which would also determine the period of its commencement:—1st. The “improvements” which were begun in the neighbourhood in 1844; and, 2nd. The Irish famines of 1846 and 1847.

The former of these causes would act in a very obvious way, and one which seems to raise a suspicion of the sanitary value of that kind of improvement which consists in occupying, with first or second rate houses, ground previously covered by the tenements of the poorer classes. The expelled inhabitants cannot, of course, derive any advantage from the new erections, and are forced to invade the yet remaining hovels suited to their means: the circle of their habitations is contracted while their numbers are increased; and thus a larger population is crowded into a less space. This consequence may induce a doubt whether the improvement, in this manner, of the external appearance of districts, may not be a means of affecting prejudicially their general health.

The latter of the above causes, also, had, no doubt, considerable influence in producing the increase. Out of the 655 persons of all ages who formed the population of Church Lane in 1841, 281—or about two-fifths—were *natives* of Ireland, and, with their families, constituted nearly the whole population. Of the great number of immigrants who, during the late disastrous years in Ireland, flocked as well into the metropolis as into other large towns of England, there can be no doubt that the vast majority sought naturally the spots frequented by their countrymen; and Church Lane must have felt considerably the effect of this accession.

I shall not attempt to settle the comparative importance of these two causes in producing the increase, and only allude to them because they affect a subsequent calculation of mortality. From them, however, I think it may be assumed that any increase resulting from the improvements did not commence until 1845; and that any increase resulting from Irish immigration did not commence until the early part of 1847. During the 7 years, from January 1, 1838 to December 31, 1844, the population may be fairly supposed to have been nearly stationary at the numbers ascertained by the Census of 1841.

*Mortality.*

I will first examine the mortality in Church Lane during the period when its population may be taken to have been stationary, viz., during the 7 years 1838 to 1844, both inclusive. In those years there occurred a total of 92 deaths in this Lane; the average annual mortality produced by which may be shown thus,—

Population of Church Lane, 1838-44 .....	655
Deaths in Church Lane, same period .....	92
Annual Mortality per cent. of the living .....	2·007, or 1 in 50.

This is a rate of mortality extremely low, but easily explained by the fact that the residents in these wretched neighbourhoods are generally removed, when overtaken by illness, to the workhouse in their vicinity, or to hospitals; and their deaths, if occurring while so removed, are not, in the register, included amongst those of their usual dwelling-place. The truth of this explanation is rendered obvious by reference to a table in the Eighth Annual Report of the Registrar-General, which shows the mortality in the entire district of St. Giles to have been, during the above period (1838-44), as high as 2·690 per cent. of the population, or 1 death to 37 living.

The real state of the case will be made evident if the mortality be calculated according to the only correct method, viz.: by ascertaining the number of deaths which took place at each *age* out of a certain number living at the same age. In no other way can a fair comparison be made between one district and another, in order to test the influence of locality; since, if one contained a less proportion than another of very young children to adults, the aggregate mortality in the former would, of course, be less than in the latter; not resulting, however, necessarily, from a healthier atmosphere or less crowded dwellings; but certainly, in great measure, from the maturity of its population, less liable to disease.

The adoption of this method with respect to the mortality of Church Lane, from 1838 to 1844, will bring out the following result:—

Age.	Population 1841.	Deaths in the seven years 1838-44.	Annual Mortality per 100 of the living.
Under 1 .....	12	26	30·95
1—2 .....	5	16	45·71
2—3 .....	19	13	9·77
3—4 .....	16	4	3·57
4—5 .....	19	2	1·50
Under 5 .....	71	61	12·27
5—10 .....	67	5	1·07
10—15 .....	60	2	·48
15—25 .....	131	6	·65
25—35 .....	128	5	·56
35—45 .....	106	3	·40
45—55 .....	56	3	·76
55—65 .....	27	4	2·11
65—75 .....	4	1	3·57
75 & upwards	2	2	14·28
Not stated ....	3	....	....
All ages ....	655	92	2·007

The following comparison between this mortality and that of other districts of the metropolis\* will still further develop the actual position of this Lane:—

Age.	ANNUAL MORTALITY OUT OF 100 LIVING.				
	Church Lane.	St. Giles, (whole district).	Lambeth.	City of London.	Islington.
Under 1 .....	30·95	28·24	20·48	19·35	15·92
1—2 .....	45·71	14·59	9·79	11·64	7·29
2—3 .....	9·77	6·67	4·77	5·78	3·59
3—4 .....	3·57	5·09	3·46	3·88	2·66
4—5 .....	1·50	3·50	2·31	3·03	1·87
Under 5 .....	12·27	11·56	8·25	8·94	6·31
5—10 .....	1·07	1·32	1·17	1·34	·94
10—15 .....	·48	·48	·45	·55	·47
15—25 .....	·65	·63	·72	·52	·70
25—35 .....	·56	1·06	·98	·91	·90
35—45 .....	·40	1·83	1·56	1·58	1·40
45—55 .....	·76	2·84	2·25	2·58	2·04
55—65 .....	2·11	4·97	4·03	4·24	3·84
65—75 .....	3·57	10·57	8·08	8·34	7·44
75 & upwards	14·28	19·72	18·98	18·59	18·54
All ages ....	2·007	2·69	2·33	2·14	1·99

Thus, out of 100 children born, there will die without attaining the age of 1 year,—

In Church Lane .....	31
„ the whole of St. Giles's .....	28
„ Lambeth .....	20
„ the City of London .....	19
„ Islington .....	16

So, out of 100 children living at the age of 1 year, there will die without die without attaining the age of 2 years,—

In Church Lane .....	46
„ St. Giles .....	15
„ Lambeth .....	10
„ City of London .....	12
„ Islington .....	7

The smallness of the number of persons living and dying in Church Lane at these particular ages may, perhaps, be thought hardly to afford data sufficient for a fair comparison; take then the period from birth to 5 years:—

Out of a population, constantly kept up, 100 children living at any age between birth and 5 years, there will die annually, without attaining 5 years,—

\* Extracted, by permission of the Registrar-General, from his forthcoming Eighth Annual Report.

In Church Lane .....	12·3
„ St. Giles .....	11·6
„ Lambeth .....	8·2
„ City of London .....	8·9
„ Islington .....	6·3

I take the mortality among children, because they are more exposed than adults to the action of local circumstances, and so present a better test of local influence; but in reading these comparisons, and especially the foregoing table, it must be remembered that, in consequence of the deaths in the workhouse and hospitals not being included, the actual mortality of Church Lane is considerably understated; while that of the other districts is fully rendered.

It will be seen that the mortality of the whole district of St. Giles is little below that of Church Lane. This arises from the fact that the great mass of its population is very little better circumstanced. Church Street, Carrier Street, Clark's Buildings, Kennedy Court, Fletcher's Court, Hampshire Hog Yard, &c., are precisely the same, as respects filth and over-crowding, as Church Lane: while Crown Street, New Compton Street, Monmouth Street (now Dudley Street), Little Earl Street, Denmark Street, Great White Lion Street, Great and Little St. Andrew Street, Short's Gardens, &c., &c., with the courts and alleys branching from them, are, as respects overcrowding, scarcely better, and doubtless feel the added influence of their pestilential neighbours.

The following is a comparison between 6 streets in the Northern District of St. Giles; and will show the mortality when less disturbed by the workhouse, as is the case with Clark's Buildings, Crown Street, Monmouth Street, and New Compton Street. High Street is a tolerable street, given for the sake of contrast.

Age.	Church Lane. 1838-44.	Clark's Buildings. 1838-44.	Crown Street. 1837-47.	Monmouth Street. 1837-47.	New Compton Street. 1837-47.	High Street. 1837-47.	Lambeth. 1838-44.
	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.
Under 5 .....	12·27	18·35	12·34	13·00	10·12	8·08	8·25
5—10 .....	1·07	2·70	1·93	1·07	1·28	·96	1·17
10—15 .....	·48	·45	·68	·24	·63	·23	·45
15—25 .....	·65	·30	1·22	·29	·47	·28	·72
25—35 .....	·56	·77	·44	·78	·75	·43	·95
35—45 .....	·40	1·40	1·01	1·24	1·37	·82	1·57
45—55 .....	·76	1·73	1·89	1·73	1·02	1·80	2·25
55—65 .....	2·11	1·02	8·21	2·65	3·59	2·73	4·03
65—75 .....	3·57	9·52	8·00	8·72	7·66	8·19	8·08
75 & upwards	14·28	28·57	8·00	18·88	12·22	10·00	12·06
All ages ....	2·007	3·45	3·09	2·72	2·41	1·65	2·33

The influence of overcrowding will be seen by a statement of the progressive mortality in Church Lane during the last 3 years. In 1845, when the population may be assumed as between 600 and 700, the deaths (excluding those occurring in the workhouse) were 8: in 1846, when the population must have slightly increased, the deaths

were 13; and in 1847, when the Irish immigration may be taken to have set in, raising the population, according to the previous estimate, to 1095, the deaths (still exclusive of those in the workhouse) increased to 52; being a proportion of 4·75 per cent., or 1 death out of 21 living.

### *Disease.*

The amount of sickness prevalent, and its character, are important auxiliary facts by which to estimate the health of districts; especially in cases like the present, where the omission of deaths taking place in workhouses and hospitals, and perhaps the escape altogether of some from registration, give an appearance much too favourable to the actual statement of mortality.

From inquiries made with your assistance at the St. Giles's workhouse, it appears that, from July 1, 1847 to January 27 of the present year, the number of persons living in Church Lane who received medical treatment (both in and out-patients) was 139; giving a proportion to the population of 12·7 per cent. Of these, 88 (or nearly two-thirds) *were cases of fever*; 13 of influenza; 8 of diarrhœa; 7 of bronchitis; 3 of small-pox; 2 of hooping cough; and the remainder of various other diseases. Five of these cases proved fatal; viz., 1 from influenza; 1 from measles; 1 from consumption; and 2 from typhus\*.

The sickness was thus distributed amongst the different houses:—

Fever Total Cases. Sickness.			Fever Total Cases. Sickness.			Fever Total Cases. Sickness		
No. 1 .....	4	4	Brt. frwd. ....	53	78	No. 19.....	67	97
„ 2 .....	5	7	No. 10.....	1	1	„ 20.....	3	9
„ 3 .....	5	6	„ 11.....	4	5	„ 21.....	1	1
„ 4 .....	3	6	„ 12.....	1	1	„ 22.....	8	11
„ 5 .....	14	22	„ 13.....	0	0	„ 23.....	1	3
„ 6 .....	5	7	„ 14.....	1	1	„ 24.....	0	0
„ 7 .....	9	16	„ 15.....	0	0	„ 25.....	2	6
„ 8 .....	7	8	„ 16.....	2	4	„ 26.....	3	5
„ 9 .....	1	2	„ 17.....	2	3	„ 27.....	0	0
Carried frwd. 53	78		„ 18.....	3	4	„ 28.....	1	4
			Carried frwd. 67	97			2	3
						Total .....	88	139

All these were cases receiving medical relief from the workhouse, either as in or out-patients. Other cases probably occurred, with or without private medical treatment, the number of which there are no ready means of ascertaining.

I am compelled, by the press of time, to omit some particulars relative to the occupations and duration of life of the inhabitants of this Lane and the surrounding neighbourhood; but I hope the foregoing facts and calculations may be serviceable to the Council.

I am, Sir,

Your obedient servant,

HORACE MANN.

W. A. Guy, Esq., M.D.,  
Honorary Secretary of the  
Statistical Society of London.

\* It is right to state that we are indebted to the courtesy of Mr. Bennett, the House-Surgeon of the workhouse, for this information.

*The Progress of the Prussian Nation, 1805, 1831, 1842.* By T. C. BANFIELD, Esq., F.S.S., of the Privy Council Office, Corresponding Member of the Central Statistical Commission at Brussels.

[Read before the Statistical Society of London, 20th December, 1847.]

ALTHOUGH this last valuable contribution to contemporary history from the pen of M. Dieterici is not a small work, yet it is easy to present a digest of its contents, suited to publication in a work of reference like the "Journal of the Statistical Society." The bulk of the volume is composed of reasons and facts adduced in justification of the figures which fill the tables. It will be sufficient, therefore, to say that every figure is accounted for in the fullest manner, and to refer to the original for the solution of any doubts that may suggest themselves on the perusal of the condensed results. This plan may be the more readily adopted that there is not the least appearance of exaggeration in any part of the work; and the result, the statements of the income and expenditure of an intelligent industrious people like the inhabitants of Prussia, will rather strike an English reader as being small in amount than the reverse. Upon this point we propose to offer some remarks later. Here we must state the plan which the Author has followed and the motives which induced him to take the course observed throughout his calculations.

The work arose from an inquiry instituted by the Author into the comparative wealth of the kingdom of Prussia at various periods in the present century. M. Dieterici found materials of a date as old as 1805, in a work published by M. Krug in that year, and which had been compiled, as far as was possible, from official data. Where such data were to be obtained, the task was not very difficult; but all old inquirers directed their attention to determining as far as possible the earnings of the nation. In this pursuit they necessarily took much for granted; since private accounts that are never published could alone disclose the whole truth. Dissatisfied with the sums assumed as manufacturing and trading profits, M. Dietrici came to a determination more in the spirit of modern science than his predecessors had shown. He reasonably concluded that the *consumption* of a nation, taken through a number of years, formed, perhaps, the nearest authenticated standard of the national *earnings* that could be obtained. What was consumed must previously have been earned; and even if the total consumption could not be minutely summed up at different periods, what could be traced laid a good foundation for proportionate calculations touching the remainder.

It remains, therefore, briefly to state the mode of calculating the consumption of the inhabitants at the three periods which the Author has selected for comparison, viz., 1805, 1831, and 1842. Agricultural statistics have ever been either publicly or secretly kept up by Governments that depended upon a land tax for revenue. In Prussia the governors of provinces have at all times made reports on the state of their districts which descend into minute details. From these it was possible to ascertain the quantity of land under tillage, the variety of the crops, and the results of the harvests. But there were, also,

means of reducing these calculations to greater exactness. Mills, in former times, were always an object of control. In Prussia a formal tax has long been, and is still, to a great extent, levied on corn ground, and on beasts slaughtered for consumption in towns. Tabular statements have been drawn up from the local registers, which are very authentic records, and these assist (the difference of means and of habits affecting town and country residents being allowed for,) in forming an estimate of the total consumption. For objects not strictly agricultural, the various excise and licensing duties, or the customs impost afforded a motive for recording weights and quantities which could be used for the calculation.

Basing his inquiry upon these data, M. Dieterici finds materials that establish a marked progress in social wealth, and he traces their connexion in a manner that is equally pleasing and instructive. The nature of the inquiry which is based upon the consumption calculated *per head of the population*, frees him from the necessity of following the changes of territory that took place during the war. The figures show the condition of the individual at each period indicated averaged over a nearly equal extent, and a number of inhabitants proportionate to that of the present kingdom of Prussia, although an exchange was effected, between 1806 and 1832, which gave to Prussia a large district on the left bank of the Rhine in place of territories that now belong to the kingdom of Hanover. It gives a peculiar zest to inquiries of this kind that they take *man* rather than *matter* as their main object, and show the power of the people to command supplies, rather than the accidental facilities that soil or climate present.

Many curious economical problems that have been started come under review in an inquiry of the kind. One of the first that we encounter is the highly interesting one of the results of an accumulation of population, for the well-being of a nation.

The kingdom of Prussia contained, in 1804, 10,023,900 inhabitants spread over a surface that gave an average of 1787 to the German square mile, or of only 84 to the English square mile. In 1832 the population, after the changes that have been named, was 13,038,960, with a mean density of 2,576 to the German, and 116 to the English square mile. In 1842 the total population was 15,471,765, and the proportions to the German square mile 3,045, to the English mile 144.

The area of the kingdom had been diminished nearly one-tenth between 1805 and 1847, by exchanges, which added the rich and industrious Rhenish province to the kingdom, and the apparent increase is equal to three-fourths of the original number, or 69 per cent. in 42 years. The determination of the real increase of the population of each province forms no part of the present inquiry.

The names of the provinces, as given in the following table, throw light upon the territorial changes effected after the war, when Prussia had given up East Friesland, Anspach, and Bairenth, as well as Warsaw, and received the present Rhenish province. The object kept in view by the author is to show that the increase of population generally has been accompanied with a more than commensurate exertion of power. He consequently goes no further into the question of the growth of the numbers of the people than is requisite to establish this fact.

*Population of the Kingdom of Prussia, in the Years 1804, 1831, and 1842.*

	German Square Miles.	1804, Population.	On the English Square Mile.	New Provincial Names.	1831, Population.	1842, Population.	On the English Square Mile, 1842.
East Prussia ..	704	553,849	} 64	East Prussia, 706.34	1,213,571	1,411,499	96
Lithuania ....	612	403,876					
West Prussia ..	612	786,858		West Prussia, 471.69	782,536	964,881	96
New E. Prussia	733	904,518	} 60				
South Prussia ..	1042	1,402,367		Posen, 536.51	1,056,278	1,290,187	108
Kurmark .....	447	797,627					
Neumark .....	220	317,810	} 68	Brandenburg, 734.14	1,579,939	1,935,107	124
Pomerania ....	464	509,617		Pomerania, 574.33	912,223	1,106,350	90
Silesia .....	714	2,019,651		Silesia, 741.74	2,464,414	2,948,884	187
Magdeburg ....	106	297,039	} 132	Saxony, 460.63	1,449,587	1,683,906	172
Halberstadt, &c.	135	412,991					
Minden, &c. ..	40	159,776					
Munster, &c. ..	113	268,542	} 112	Westphalia, 367.96	1,261,996	1,421,443	182
Mark, &c. ....	71	216,543					
East Friesland..	60	119,803		Rhineland, 487.14	2,288,596	2,679,508	..
Anspach, Bai- }	135	505,434	} 176		..	..	..
reuth, &c.... }					..	..	..
Neuchatel ....	14	46,430	151				
..	10,023,900		84		13,038,960	15,471,765	144

1 German square mile = 21.25 English square miles.

The consumption of the population is derived from an examination of all the returns made to the Statistical Bureau, but as these are defective at the first period, the necessary calculations are made upon data supplied by Krug's work. It appears from this, that 6 scheffels, or a little more than one quarter of mixed wheat and rye, was the estimated consumption for adults by the millers' experience. The meal tax levied in the towns shows a consumption for all ages not exceeding 3.8 scheffels, of 80 lbs. weight, and from these and other data it is assumed that the consumption may be calculated at 4 scheffels, or about 6 bushels, per head of the population.

This consumption for 10,000,000 persons gives ..... 40,000,000 scheffels,  
as the probable quantity used at home in 1805.

The exported quantity is taken at ..... 4,000,000 ..

The average crop of bread corn exclusive of seed being ..... 44,000,000 ..

In the years 1829, 1830, and 1831, the quantity of wheat  
exported averaged ..... 3,710,508 scheffels.

Rye exported ..... 1,629,964 ..

The consumption of corn in the towns increased, between  
1805 and 1831, 10 lbs. 12 oz. rye per head, with a  
diminution of 1 lb. 10 oz. per head in wheat. Potatoes  
had come much into use in this interval, but notwith-  
standing this circumstance, M. Dieterici finds sufficient  
grounds to assume, at the least, no diminished con-  
sumption of grain. The increased population made a  
production necessary of 4 scheffels per head, equiva-  
lent to ..... 52,000,000 ..

Total produce ..... 57,340,452 ..

*Consumption of Grain per head of the Population in Twelve Large Towns of Prussia, at Three Periods.*

	1805.			1831.			1841.		
	Wheat.	Rye.	Total.	Wheat.	Rye.	Total.	Wheat.	Rye.	Total.
	lbs. oz.	lbs. oz.	lbs. oz.	lbs. oz.	lbs. oz.	lbs. oz.	lbs. oz.	lbs. oz.	lbs. oz.
Berlin ....	110 9 $\frac{1}{2}$	232 8	342 12 $\frac{1}{2}$	84 7	180 7	268 14	107 2	175 10	282 12
Breslau ....	86 8 $\frac{1}{2}$	250 8	337 7 $\frac{1}{2}$	521 0	256 6	309 0	150 12 $\frac{1}{2}$	227 14 $\frac{1}{2}$	378 11
Königsberg...	121 13	190 4	312 1	611 4	213 3	274 15	60 8 $\frac{1}{2}$	215 6 $\frac{1}{2}$	275 15
Danzig ....	121 1	226 12	347 13	45 5	220 12	265 15	52 14	232 1 $\frac{1}{2}$	284 31
Magdeburg...	122 9	293 12	416 5	119 12	248 9	368 5	102 3 $\frac{1}{2}$	236 15	339 2 $\frac{1}{2}$
Potsdam ....	86 14 $\frac{1}{2}$	266 13	353 11 $\frac{1}{2}$	81 11 $\frac{1}{2}$	231 7	313 2 $\frac{1}{2}$	97 8 $\frac{1}{2}$	204 7	301 15 $\frac{1}{2}$
Stettin ....	111 3	267 1	378 4	101 2	249 0	350 14	106 14	312 14	419 12
Erfurt ....	55 11	267 7	323 2	67 9 $\frac{1}{2}$	347 14 $\frac{1}{2}$	415 8	50 12 $\frac{1}{2}$	358 3	408 15 $\frac{1}{2}$
Halberstadt .	64 15	312 3 $\frac{1}{2}$	377 2 $\frac{1}{2}$	65 9 $\frac{1}{2}$	286 2	351 11 $\frac{1}{2}$	84 11	315 8	400 3
Brandenburg	113 11 $\frac{1}{2}$	222 7 $\frac{1}{2}$	336 3	86 10 $\frac{1}{2}$	216 7	303 1 $\frac{1}{2}$	92 11 $\frac{1}{2}$	266 6	359 1 $\frac{1}{2}$
Neisse ....	42 12 $\frac{1}{2}$	287 8	330 9	42 0	328 8	370 8	54 3	302 10 $\frac{1}{2}$	356 13 $\frac{1}{2}$
Glogau ....	67 12	168 9	236 10	52 19 $\frac{1}{2}$	296 6	349 4 $\frac{1}{2}$	58 8	257 2	315 10

The tables of the consumption in the large towns show, in 1842 over 1831, a great progress, both in the quantity and in the quality of the grain consumed for food. It was

1831.....	Wheat....	65 lbs. 5 $\frac{1}{2}$ oz.	1841.....	Wheat....	78 lbs. 14 $\frac{1}{2}$ oz.
„ .....	Rye.....	240 „ 12 $\frac{1}{2}$ „	„ .....	Rye.....	237 „ 13 $\frac{1}{2}$ „
306 „ 2			316 „ 12		

The increase is therefore 10 lbs. 10 oz. per head of the population, a large augmentation when the increase of the population is taken into account. At the same period the excess of exports of grain over the imports had also very much increased, being

Imported....	Wheat and spelt, 69,670	Scheffels.	Exported....	Wheat and spelt, 4,065,087	Scheffels.
„ .....	Rye .....	52,970	„ .....	Rye .....	2,808,254
122,640			6,873,341		

There are, therefore, data to warrant the conclusion that the arable land in Prussia produced, in 1805, 44,000,000; in 1831, 58,000,000; in 1841, 68,000,000 scheffels.

The growth of population within these periods had been, 1805, 1; 1831,  $1\frac{3}{10}$ ; 1843,  $1\frac{1}{2}$ .

The production of grain had followed a more rapidly increasing progression; 1805, 1; 1831,  $1\frac{7}{14}$ ; 1841,  $1\frac{2}{3}$ .

The number of head of cattle in the Prussian territory is shown to have been

	Black Cattle.	Calves.	Sheep.	Pigs.
	Head.	Head.	Head.	Head.
1805 .....	4,856,068	1,923,932	10,394,428	2,447,044
1831 .....	4,446,368	....	11,751,603	1,736,004
1842 .....	5,042,010	2,587,039	16,235,880	2,115,212

There is no great numerical increase shown by this table, but there is reason to suppose that a great improvement took place in cattle breeding, which resulted in a much greater average weight of the beasts.

*Average Weight of Cattle assumed in the Market Returns of the Slaughtering Tax.*

	Oxen and Bulls.	Cows and Heifers.	Calves.	Sheep.	Pigs.
1805.....	300	200	24	20	70
1836.....	555	350	46	41	141
1842.....	585	372	48	42	152

From the numbers and weights in these two tables a motive clearly existed for doubling the standard of weight between 1805 and 1842.

The consumption of meat has been assumed to average per head of population for the kingdom a little more in 1842 than in 1831, the increased weight of the beasts having been more than proportionate to the growth of population.

	1805.	1831.	1842.
Consumed per head....	33 $\frac{82}{100}$ lbs.	34 $\frac{71}{100}$ lbs.	35 $\frac{14}{100}$ lbs.

A means of controlling the calculated consumption of meat is afforded by the Excise Tables of the towns in which the grinding and slaughtering tax is levied. These tables showed the consumption of the largest towns to be

	1805.		1831.		1842.	
	lbs.	oz.	lbs.	oz.	lbs.	oz.
Berlin .....	83	6	104	8 $\frac{1}{2}$	116	13
Breslau .....	94	1	76	12	95	2
Königsberg .....	109	6	74	1 $\frac{1}{2}$	72	5 $\frac{1}{2}$
Danzig .....	72	31	75	9 $\frac{1}{2}$	83	3 $\frac{1}{2}$
Magdeburg .....	63	25	82	8	92	9 $\frac{1}{2}$
Potsdam .....	62	22	84	0	101	12 $\frac{1}{2}$
Stettin .....	88	9	72	0	104	13 $\frac{1}{2}$
Erfurt .....	65	23	71	11 $\frac{1}{2}$	75	13 $\frac{1}{2}$
Halberstadt .....	51	1	62	13	71	15 $\frac{1}{2}$
Brandenburg .....	56	2	51	3	78	14
Neisse .....	59	26	63	11	62	14 $\frac{1}{2}$
Glogau .....	137	4	94	4 $\frac{1}{2}$	89	8

	1805.	BEER.	1831.	1842.
No return. ....	15 $\frac{13}{100}$	quarts.	.....	13 $\frac{11}{100}$ quarts.
		WHISKEY.		
No return. ....	8 $\frac{1}{2}$	quarts.	.....	5 $\frac{93}{100}$ quarts.
		WINE.		
No return. ....	2	quarts.	.....	2 quarts.

## TOBACCO.

1805.		1831.		1842.
No return.	.....	3 $\frac{3}{10}$ lbs.	.....	3 $\frac{1}{10}$ lbs.

## SUGAR.

	1805.		1831.		1842.
Colonial	No return.	.....	3 $\frac{453}{1000}$ lbs.	.....	4 $\frac{28}{100}$ lbs.
Molasses	„	.....	0 $\frac{764}{1000}$ „	.....	0 $\frac{8}{100}$ „
Beetroot	„	.....	.....	.....	1 „
Estimate	1 $\frac{1}{2}$ lbs.	.....	4 $\frac{217}{1000}$ „	.....	5 $\frac{36}{100}$ „

*Leather.*—The tanned hide is estimated to weigh 45 lbs., and to cost 1*l.* 1*s.* The quantity of leather manufactured in Prussia was estimated, in 1805, at 600,000*l.* in 1831, 1,300,000*l.* in 1841, 1,620,000*l.*

The consumption was in the two last periods about 20 lbs. annually per individual.

*Mining.*—The following table shows the quantities and values of the minerals raised within the kingdom.

	1805.	1831.	1842.
Gold, marks.....	11 $\frac{43}{48}$	.....	.....
Silver „ .....	8,028	19,031	21,798
Copper, refined, cwts.....	6,749	15,672	16,371
Lead „ .....	7,683	15,499	26,779
Litharge „ .....	7,285	32,536	12,712
Zinc „ .....	16,169	111,143	276,126
Cobalt „ .....	.....	653	1,752
Arsenic „ .....	1,740	3,466	.....
Antimony „ .....	.....	.....	1,784
Manganese „ .....	.....	1,359	5,588
Iron and Steel „ .....	368,010	1,241,665	1,962,112
Sulphur „ .....	263	775	604
Coals, bushels .....	4,261,032	7,019,958	14,900,934
Lignite „ .....	61,164	1,709,495	4,431,645
Salt, lbs. ....	96,236,000	175,687,098	200,968,000
Alum, cwt. ....	.....	30,830	57,425
Vitriol „ .....	4,528	39,233	36,727

## Summary of Minerals Valued at the Place of Production.

	1805.	1831.	1842.
	Dollars.	Dollars.	Dollars.
Metals .....	1,400,679	3,832,318	7,274,819
Combustibles .....	488,209	2,837,272	6,215,285
Salts .....	353,565	1,579,986	1,765,873
	2,242,453	8,249,576	15,255,977
	£336,368	£1,237,436	£2,288,896

**CLOTHING. Woollens.**—In 1805 it is assumed that  $18\frac{1}{3}$  millions of lbs. of wool were produced from 11 million sheep. Imported 3,004,425 lbs., in all 21,337,758 lbs., giving 9,698,981 lbs. of cloth, or 9,092,795 ells, or half an ell per head of the population.

The consumption of woollen wares is calculated on the following principles. From 1 cwt. wool, cloth weighing 65 lbs. is made; 23 lbs. cloth give 32 Berlin ells. (In 1805 there was more coarse cloth used, and the proportion taken is 32 ells = 30 lbs.)

11,751,603 sheep gave in 1831 .....	25,853,527 lbs. of wool.
Excess of export over import .....	4,081,330 „ „
	<hr/> 21,772,197

Which measured by the proportions given above, would yield,  
12,865,389 lbs. of cloth, or 17,899,672 Berlin ells.

If we deduct as exported 2,908,840 „ „	4,047,082 „ „
<hr/> 9,956,549 „ „	<hr/> 13,852,590 „ „

being very nearly 1 ell per head of the population, or  $\frac{3}{4}$  yard.

The average yield of wool is here taken very low, at about  $2\frac{1}{5}$  lbs., long woolled sheep in England yield 10 lbs., and Mr. McCulloch's average for Great Britain\* is based on a yield of  $3\frac{1}{2}$  lbs. per sheep. At this rate the production of wool in Prussia would amount to 60,000,000 lbs. The census of 1843 showed that there were in Prussia more sheep than in 1831,

Merino breed .....	1,804,853
Half-breed .....	2,493,036
Country breed .....	186,388
<hr/> In all .....	<hr/> 1,484,277

There was also an increase of 5,770 looms in constant employment. From these data alone can it be argued that there was an increased consumption within the kingdom, the free intercourse within the Zollverein preventing any more accurate estimate for Prussia alone.

**Linen.**—The consumption in 1805 was estimated to be 4 ells per head of the population.

The production of linen is calculated from the number of looms that are rated to the industry tax.

	Ells.
Those in regular work in 1831 were 35,668, yielding at 5 ells daily....	65,000,000
As supplementary employment 216,780 .....	33,000,000
	<hr/> 98,000,000
Excess of exports over imports, 56,208 cwt., 1 lb. = 4 to 5 ells ....	24,000,000
	<hr/> 74,000,000
Remain .....	

Showing a consumption in the country in 1831 of 5 to 6 ells, or 3 to 4 yards, per head of the population.

	Ells.
In 1805, 4 ells per head internal consumption .....	40,000,000
Export .....	24,000,000
	<hr/> 64,000,000

or but two-thirds of the production of 1831.

\* 470,000 packs of wool, weighing 210 lbs. each, "Geographical Dictionary, England and Wales."

In 1841 the looms at constant work were 34,451, showing a      Ells.  
diminution of 1217. These at 5 ells ..... = 62,873,035  
Occasionally employed in 1843, 276,071 looms ..... = 41,985,798

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104,858,873

The excess of exports from the Zollverein was 70,719 cwts.,  
making for Prussia, perhaps ..... 30,000,000

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Which leaves for home consumption.... 74,858,873  
about the same with the consumption of 1831.

*Cotton.*—In 1805 the estimated consumption was something less than  $\frac{3}{4}$  ell ( $\frac{1}{2}$  yard) per head.

The quantity of yarn spun within the kingdom was ..... 630,656 lbs.  
The excess of imports over exports ..... 451,755 „  


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1,082,411 „

Assuming a loss in weaving of  $\frac{1}{4}$ , and that 40 ells of cloth weigh  $4\frac{1}{2}$  lbs., the production was 7,216,080 ells.

In manufactured goods there was an excess of imports over exports, which probably left 7,253,778 ells, or  $\frac{7}{10}$ , being a little under  $\frac{3}{4}$  ell, or half a yard, for the consumption per head of the population.

In 1831 .... Raw cotton imported..... 41,068 cwt.  
„ „ „ exported ..... 1,831 „  


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39,237 „ = 4,316,070 lbs.  
The Prussian calculation is one-fourth waste .... 392,370 „  


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Leaves for yarn ..... 3,923,700 „  
Excess of imports over exports..... 10,859,420 „  


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14,783,120 „

This weight is assumed to be further reduced in other processes of manufacture to 11,087,340 lbs., which, at 40 ells to  $4\frac{1}{2}$  lbs. weight, gives

98,554,143 Berlin ells, and taking  
6,132,622 „ „ as the excess of exports over imports

92,421,511 ells, or 7 ells per head of the population as the home consumption of 1831.

A detailed analysis of the cotton manufacture and importation in the whole Zollverein for 1840, 1841, and 1842, given by M. Dieterici in his Statistical Report for those years, shows that the home consumption of cottons in those years was 13 ells per head, or between 8 and 9 yards.

*Silk.*—In 1805 the quantity of silk worked up in Prussia was 242,610 lbs., yielding perhaps 190,000 lbs. of textiles, which, as the fashion ran on heavy stuffs, may be estimated at 15 ells to the lb., or, in all, at

Exported ... .. 300,000 „

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Consumption ... .. 2,550,000 ells  
or about  $\frac{1}{4}$  ell per head of the population.

The import of raw silk in 1831 was .....	6,076 cwt.	
Home production .....	20 „	
	6,096 „	
Excess of import of bleached and dyed .....	387 „	
	6,483 cwt., or 713,130 lbs.	
Excess of export of silk manufactures .....	5,241 „	or „
	1,242 „	or „

If 1 lb. be equivalent to 20 ells, this would give  $14\frac{1}{2}$  millions ells, being a fraction more than  $\frac{1}{3}$  ell per head of the population.

The average quantity imported, in the years 1840-1842, in the whole Zollverein, was 12,900 cwt.; which, after deducting the excess of exports, or 4,672 cwt., leaves, as the share for home consumption, 9 to 10 million of ells, or at the rate of  $\frac{1}{3}$  ell per head.

The following table shows the state of the hand-weaver's trade:

*Number of Looms in Constant Occupation.*

	Silk and Half Silk.	Cottons.	Woollens	Linens.	Hosiery.	Tapes and Ribbons.
In 1805 .....	....	....	....	....	....	....
„ 1831 .....	8,956	25,464	15,360	35,668	2,110	32,642
„ 1841 .....	16,911	47,747	17,911	34,451	2,272	....

Weaving by machinery is very little practised in Prussia. But spinning is carried on upon a large scale, especially in the Rhenish province, where there are mills with 20,000 and more spindles.

In general, however, the number of spindles is very small, since 136 cotton mills, the number in all Prussia, only count 150,436 spindles amongst them, or about 1,100 spindles per mill. The average in the Rhenish province is 2,690 spindles per mill.

3,300 carded woollen yarn establishments have	105,603 spindles,
649 for combed wool, have .....	47,083 „
17 flax spinning-mills have .....	27,819 „

*Trade.*—A very elaborate investigation into the trade reports is summed up by M. Dieterici, in the following manner. For 1840 to 1842 it was necessary to calculate approximately the value of the special trade of Prussia from that of the Zollverein, in which it is now included.

The valuations are very difficult to determine of these different items. In 1831 it would seem as if the values of the exported manufactured goods were rated too high, being fixed at 60,491,243 dollars, while the raw and half manufactured materials were only valued at 29,630,599 dollars. In 1840 to 1842 the proportions are better observed; the exported manufactures being valued at 86,298,307 dollars, but the imported materials, raw and half manufactured, being valued at 74,314,163 dollars.

## IMPORTS.

	1805.	1831.	1840-1842.
	Dollars.	Dollars.	Dollars.
Eatables .....	6,369,242	5,438,939	5,036,159
Liquors .....	3,809,926	1,397,168	1,089,191
Colonial Wares, &c .....	14,537,798	16,238,042	16,498,617
Manufacturing Materials .....	9,893,732	29,630,599	40,292,930
Manufactures .....	14,748,974	17,902,194	14,758,806
Other Goods .....	4,072,374	14,575,356	16,614,636
	53,341,956	85,182,298	94,290,339

## EXPORTS.

	51,567,053	106,466,007	95,000,000
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From the preceding statements it appears that the progress of material improvement in Prussia within the present century has been steady, if not very rapid. The population increasing at a ratio exceeding 1 per cent. per annum, now doubles itself in periods of about 70 years, and we have seen by the opening statement that within 40 years, of which 10 were years of war, it had increased by one-half.

Up to the present moment there has, however, been little pressure from the growth of the population. It is, with the exception of a few districts, scattered over a vast extent of country, the average density in 1842 having been 144 to the English square mile. For habitations there is, therefore, room enough, and the laws of 1811 converted the peasant population into small proprietors. At the same time the claim upon the forests adjacent to each village was secured by law to the villagers; fuel being recognised as equally essential with food in a cold climate. The change induced a faulty organisation of industry, since it operated as a bribe upon too many hands to devote themselves to the cultivation of the soil, yet we must add the comforts and advantages accruing from the independence secured to a scattered population, a large portion of which was, by these enactments, released from serfage by such a measure, to the comforts which the concluding table, given by M. Dieterici, shows the people of Prussia now command, if we would form an estimate of their condition.

If we calculate the amount of the consumption of each individual in Prussia in the year 1843, at the prices of that year, the total price shows a cheapening on the whole as compared with the prices of 1831, of  $6\frac{1}{5}$  per cent., and as compared with 1805, of  $8\frac{2}{5}$  per cent.

On the other hand, if we compare the small consumption of 1805, at the then existing prices, with the large consumption of 1843, at the reduced prices, the increased earnings of each individual ought, in the latter year, to equal  $92\frac{2}{5}$  per cent.

Average Consumption per head of the Population, Calculated at Three Periods 1806, 1831, and 1842.

1806.			1831.			1842.		
Quantity.	Price.	Value.	Quantity.	Price.	Value.	Quantity.	Price.	Value.
		Dols. Gros Pfenn.			Dols. Gros Pfenn.			Dols. Gros Pfenn.
4 scheffel corn, { chiefly rye ....}	1 dol.	4 0 0	4 scheffel corn, { chiefly rye ....}	2 dols.	8 0 0	4 scheffel corn, { chiefly rye ....}	2 dols.	8 0 0
33 lbs. meat .....	2 gros	2 6 0	34 $\frac{3}{4}$ lbs. meat .....	2 $\frac{3}{4}$ gros	3 5 6	35 lbs. meat .....	2 $\frac{3}{4}$ gros	3 6 3
15 quarts beer .....	2 $\frac{1}{100}$ dol.	0 9 0	15 quarts beer .....	3 $\frac{3}{4}$ dols.	0 13 6	13 quarts beer .....	3 $\frac{3}{4}$ dols.	0 11 8
3 " whiskey .....	3 $\frac{3}{4}$ gros	0 11 3	8 " whiskey .....	3 $\frac{3}{4}$ gros	0 28 0	6 " whiskey .....	3 $\frac{1}{2}$ gros	0 21 0
3 " wine .....	10 "	0 7 6	2 $\frac{1}{2}$ " wine .....	10 "	0 25 0	2 " wine .....	10 "	0 20 0
3 lbs. rice .....	1 $\frac{1}{100}$ dol.	0 1 0	1 lb. rice .....	11 dol.	0 1 6	1 $\frac{1}{10}$ lbs. rice .....	9 dol.	0 1 7
1 $\frac{1}{2}$ " sugar .....	7 gros	0 10 6	4 $\frac{3}{4}$ lbs. sugar .....	6 gros	0 26 3	5 " sugar .....	5 $\frac{1}{4}$ gros	0 26 3
3 " coffee .....	6 "	0 4 0	2 $\frac{1}{10}$ " coffee .....	6 "	0 13 9	2 $\frac{1}{2}$ " coffee .....	5 "	0 12 6
Spices .....	...	0 3 0	Spices .....	...	0 3 6	Spices .....	...	0 3 6
17 lbs. salt .....	1 $\frac{1}{4}$ gros	0 21 3	17 lbs. salt .....	1 $\frac{1}{4}$ gros	0 21 3	17 lbs. salt .....	1 gros	0 17 0
1 $\frac{1}{2}$ " tobacco .....	4 "	0 6 0	3 $\frac{3}{4}$ " tobacco .....	3 "	0 9 11	3 $\frac{1}{10}$ " tobacco .....	3 gros	0 9 4
1 $\frac{1}{2}$ to $\frac{3}{4}$ ell cloth .....	1 $\frac{1}{2}$ dol.	0 21 0	1 ell cloth .....	1 $\frac{1}{2}$ dol.	1 15 0	1 $\frac{1}{2}$ ell cloth .....	1 $\frac{1}{2}$ dol.	2 0 0
4 ells linen .....	7 $\frac{1}{2}$ gros	1 1 0	5 $\frac{1}{2}$ ells linen .....	7 $\frac{1}{2}$ gros	1 11 3	5 ells linen .....	7 $\frac{1}{2}$ gros	1 7 6
3 $\frac{3}{4}$ ell cotton .....	20 "	0 15 0	7 " cotton .....	6 gr. 1 $\frac{1}{2}$ pf.	1 12 10	13 " cotton .....	6 "	2 18 0
1 " silk .....	1 dol.	0 7 6	3 $\frac{1}{4}$ " silk .....	25 gros	0 8 6	25 " silk .....	25 "	0 9 4
Leather .....	...	0 12 0	Leather .....	...	0 20 0	Leather .....	...	0 20 0
		11 15 0			21 5 9			22 3 11
			The same consumption valued at the current prices of 1806			Valued at the prices of 1831 ...		
						prices of 1806 ...		
						22 16 6		
						23 28 6		

The dollar in Prussia is equal to 3 shillings English. The dollar has 30 gros; 10 gros = 1 shilling; the gros has 12 pfennige; therefore 1 pfenn. =  $\frac{10}{12}$  shilling, =  $1\frac{1}{3}d$ .

General fall in prices from 1805 to 1831 was as 100 to 94 = 6 per cent.  
 And from 1831 to 1842 ..... 100 to 98 = 2    ,,  
 Consequently from 1806 to 1842 ..... 100 to 92 = 8    ,,

The increased consumption was, in 1831 over

1805, in the ratio of ..... 100 to 184  
 And in 1842 over 1831, as ..... 100 to 183  
 In 1842 over 1805, as ..... 100 to 196·4

In the table resuming this interesting inquiry, the prices of home produce are estimated to have risen, and those of manufactured goods, as well as of colonial produce, to have fallen proportionately. The former (the rise of home produce) is of course a detraction from the gain ensuing on manufacturing improvements, in so far as it bears upon articles of the first necessity, and is not the result of a transition to luxurions cultivation.

But although M. Dieterici devotes attention specially to the consumption of the population, he gives some statements which illustrate the national savings, and the mode adopted of applying such in Prussia; the mode of treating this part of his subject, which he only introduces incidentally, is by no means exhaustive, nor are the data furnished regarded as complete.

The handicraft trades in which labour is chiefly aided by circulating capital had increased in the following proportions:—

1831.		1841.	
Masters.	Apprentices and Workmen.	Masters.	Apprentices and Workmen.
328,285	183,914	400,932	309,570

Or, with an increase of population equivalent to 18·66 per cent.

The number of masters had increased ..... 22·13    ,,

Apprentices and Workpeople ..... 68·32    ,,

The number of Weavers' looms increased from 310,739 to 401,275

Or, in the proportion of ..... 29 per cent.

Half silk and Silk looms ..... 89    ,,

Cotton looms ..... 88    ,,

In linen there was a diminution.

Factories or establishments in which fixed capital is used as an accessory to labour, are enumerated as follows:—

	1831.	1841.
Cotton Mills .....	..	{ 136 with 150,436 spindles
Carding Wool .....	...	{ 3,300 with 405,603    ,,
Combing Wool .....	...	{ 649 with 47,061    ,,
Flax Mills .....	...	{ 17 with 27,819    ,,
Brick and Tile Kilns .....	3,249	5,165
Lime Kilns .....	1,392	2,197
Glass Houses .....	96	114
Tar Furnaces .....	669	723
Iron Hammers .....	1,148	1,178

	1831.	1841.
Copper Hammers .....	93	73
Corn { Water power .....	13,949	14,220
Mills. { Wind do. ....	9,764	10,572
{ Horse do. ....	687	374
Oil, Fulling, and Tan Mills ....	4,219	6,671
Paper Mills .....	417	455
Saw Mills .....	2,319	2,527
Sugar Refiners .....	{ 74, working 449,025 cwts.	{ 61, working 946,853 cwts.
Beet Root Sugar Mills .....	{ 90, producing 19,925 cwts.	{ 99, producing 189,281 cwts.

The number of public buildings was, at the two periods, compared,

	1831.	1842.
For religious purposes .....	16,881	16,668
For secular purposes .....	53,546	59,465
Private Houses .....	1,699,035	1,874,472
Factories, Mills, Warehouses ....	99,131	110,161
Stables, Barns, &c. ....	1,648,941	2,028,107

The insured value of these buildings increased, from returns obtained from the insurance offices, from 748,909,055 dollars in 1832, to 1,103,454,496 dollars in 1842, or in the proportion of 100 : 147.

The progress in the inland navigation is shown by the number of barges on rivers and canals.

1831.		1843.	
Vessels.	Burthen.	Vessels.	Burthen.
7,760	163,306 lasts.	12,186	313,748 lasts.

The last is 4000 lbs. Prussian, or something less than two tons.

The ocean navigation had advanced more slowly.

1831.		1842.	
Vessels.	Burthen.	Vessels.	Burthen.
662	76,987 lasts.	799	108,791 lasts.

The length of macadamised roads in Prussia was, in 1831, 848,623, in 1843, 1,383,324 German miles. This only shows the roads maintained by the Crown. The German mile is equal to 4 geographical, or  $4\frac{3}{4}$  common, miles approximatively.

The length of railroads opened in 1845 was 127,376 German miles, which cost, on an average, 298,393 dollars per mile, being equivalent to about 726 English miles, at a cost of 7,851*l.* per mile.

*Analysis of the Census of New South Wales.*

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[Read before the Statistical Section of the British Association at Oxford,  
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A CENSUS of the population of New South Wales which was taken on the 2nd March, 1846, and a copy of the results issued from the Colonial Secretary's Office at Sydney, on the 4th November, 1846, has been recently presented to the Statistical Society of London. This document is of such a nature as to justify an abstract of the information contained in it being brought under the attention of the present Meeting. The form in which the census has been taken, particularly in regard to the classification of ages, is very defective, the only terms of life recognized being

Under 2 years	21 years and under 45 years
2 years and under 7 years	45   "   "   60   "
7   "   "   14   "	60 and upwards.
14   "   "   21   "	

The facts obtained under this enumeration are in the original document presented in their detailed form, without any general analysis showing their relative bearing on each other, so that a perusal of the document involves the necessity of many calculations to render it intelligible. In other respects, the classification of districts, and the facts given in connexion with the social and civil, religious and educational conditions of the population appear to be well calculated to throw much light on the state of the colony. An abstract of these facts under a somewhat different analysis and form is proposed to be given in this paper, in order to render the information more useful for reference and easy in its application.

Table I. represents the population of New South Wales as taken on the 2nd March, 1846, for the whole of the Sydney or Middle District as it is called, for the Port Philip District, and for the different Urban Communities in each of these districts, for each sex and each term of life recognized in the census. The table itself will sufficiently exhibit and explain the details, from which it will be seen that the

	Males.	Females.
Total population of the Sydney District .....	92,389	62,145
"      Port Philip   "   .....	20,184	12,695
"      New South Wales .....	112,573	74,840

Again, the total urban population consists of

	Males.	Females.
The City of Sydney .....	20,810	17,548
"   Suburbs of Sydney   .....	3,546	3,286
"   Towns and Villages .....	14,207	10,535
"   Port Philip   .....	7,956	7,085
The total Urban Population of New South Wales   .....	46,519	38,454

In another portion of the same table will be found the proportion per cent. of the population for each sex, in each district. It will thus be seen that the proportion of the male sex under two years of age in the whole of New South Wales is 7·003, while in the Urban District of Port Philip the ratio is as high as 10·985 per cent., and in the Commissioners' Districts beyond the limits of location 4·334 per cent. only. Again, for the female sex, the average proportion under two years of age for the whole of New South Wales is 10·543 per cent., but for the whole of the Port Philip District 13·304 per cent., and in the City of Sydney District as low as 7·630 per cent. In every one of the districts, except the suburbs of Sydney, there is a greater proportion of the female sex under two years of age than of the male sex, but in that district, there is a barely appreciable higher ratio in the male sex. It is also curious to observe that while the whole of the Port Philip District shows 8·377 per cent. of the male population under two years of age, and the urban portion of the same district shows as much as 10·905 per cent., that with regard to the female sex this order is just reversed, there being a higher ratio in the whole district than in the sub-district or urban portion, thus producing the apparent anomaly of the rural districts having a greater tendency to produce female children, and the urban districts to produce male children. Another feature in this table is worth notice, the proportion of males under two years of age in the Commissioners' Districts is 4·334 per cent., while of the females the ratio is nearly three times as much, 12·168 per cent. These results will, however, on closer examination, be found, as already stated, to be only apparently anomalous, produced not by any peculiar circumstances connected with the infant population, but with a remarkable irregularity in the distribution of the mature population, as the following facts will show.

DISTRICTS.	Infant Population under 2 years.		Mature Population aged 21 and under 45.		Per Cent.
	Males.	Females.	Males.	Females.	
Whole of Port Philip District ....	1,691	1,689	12,198	5,754	47·0
Urban portion of same .....	874	901	4,147	3,195	77·0
Commissioners' Districts .....	512	467	8,151	1,678	25·0

It will thus be seen that in the above districts there is on the whole a preponderance of male children following the law of other populations, but that in one district the mature female population is about 77 per cent. of the males; in another the ratio is only 25 per cent., and hence the apparently contradictory results which a reference to the up-grown population sufficiently explains. The following abstract will exhibit the distribution of the population in the principal districts of New South Wales, and also in England and Wales. The results for the minor districts will be seen by consulting Table I.

Ratio per cent. of Population at each Age.							Ratio of Females to Males at each Age.		
Ages.	England and Wales.		New South Wales.		Urban District of New South Wales.		England and Wales.	New South Wales.	Urban District of New South Wales.
	Males.	Females	Males.	Females	Males.	Females			
Under 2 yrs.	5.449	5.312	7.003	10.543	7.947	9.476	102.067	100.08	98.57
2 & under 7	13.346	12.869	12.795	19.239	14.491	17.478	100.953	99.96	99.56
7     "   14	16.063	15.139	9.512	13.501	10.624	13.205	98.671	94.36	102.75
14     "   21	13.886	13.711	6.284	9.870	6.949	11.146	103.378	104.41	132.57
21     "   45	33.598	31.825	52.418	40.506	48.883	42.542	108.515	51.37	71.94
45     "   60	10.370	10.488	9.499	5.082	8.435	4.847	105.863	35.59	47.50
60 & upwards	6.833	7.515	2.486	1.258	2.669	1.305	115.148	33.66	40.42
Ages not specified }	455	141					32.399		
Total     ....							104.691	66.48	82.66

From the above abstract it is seen that while 52.418 per cent. of the male population of New South Wales is aged 21—45, that only 40.506 of the female population is of that term of life. In the Urban district more uniformity prevails, the ratio of males being 48.883 per cent., and females 42.542 per cent. It will also be seen that the proportion of females to males is much higher in the Urban districts than in the colony generally.

On referring to Table II. the numbers and proportions married and single, for each sex and district of the colony, will be found, and it thus appears, that 31.137, or 27.66 per cent. of the whole male population is married, while 31.140, or 41.61 of the whole female population is married. In the suburbs of Sydney the highest ratio of married males will be found, but in the counties of Stanley and Auckland the highest proportion of females, the ratio being 38.24 per cent., and 50.49 per cent. respectively. The minimum ratio of males being found in the Commissioners' Districts, and the minimum ratio of females in the towns and villages, the former showing 15.69 per cent., and the latter 40.02 per cent. It will also be seen that the proportion of married and unmarried females is very uniform throughout the various districts compared with the social condition of the males, in which remarkable fluctuations are observable.

In the same table will be found the ratio of those married in each sex to the population, of fourteen years of age and upwards; the average for the male sex is 39.13 per cent., but for females 73.36 per cent. throughout the whole of the colony. The district in which the greatest proportion of males above fourteen is married is to be found in the Urban district of Port Philip, and the least in the Commissioners' Districts, the respective ratios being 57.31 per cent., and 18.7 per cent. of the females above the age of fourteen, the highest ratio 87.61 per cent. will be found married in the Stanley and Auckland counties,

and the lowest, 65·72, in the city of Sydney\*. The following abstract will show the proportions married in the various European states.

Year.	Country.	Per cent. Married.	
		Males.	Females.
1841	France .....	38·34	37·30
1840	Saxony.....	36·03	34·13
1835	Sweden .....	35·00	32·81
1840	Russia .....	33·09	33·08
1835	Norway .....	32·97	31·68
1832	Wurtemberg ....	32·69	31·02
1842	Hanover .....	32·05	31·72
1840	Netherlands ....	31·77	30·48
1841	Ireland.....	28·40	28·40

The next question in connexion with this subject to which attention will be directed is the state of education in the colony.

The official document from which these facts are collected shows for each sex, and in each district,

The number who cannot read	} under 21 years of age.
„ can read only	
„ can read and write	

and the same information for those above twenty-one years of age, but it is stated that an Educational Return in a more detailed form is in course of preparation, and will be published when completed. On turning to Table III. it will appear that the information now given has been thrown into a somewhat complete form, and it will be seen that the population in each district and for each sex above twenty-one years of age has been placed against the numbers possessing the various educational qualifications recognized. With regard to those under the age of twenty-one who were returned under the educational qualifications, it has been thought fair to assume that few under the age of six years should be considered as possessing those qualifications, and a calculation based on the numbers given in the population census has been made for each sex and district, to determine the population between the ages of six and twenty-one. This much being stated, the tables will explain themselves.

For the whole of New South Wales it will appear that there are

	Males. Per cent.	Females. Per cent.	
Can either read or write.....	77·88	76·76	Ages 21 & upwards.
Can read and write.....	65·97	55·42	
Can read only .....	11·91	21·34	
Cannot read.....	22·12	23·24	
Can either read or write.....	84·89	88·14	Ages 6-21.
Can read and write.....	53·20	52·17	
Can read only .....	31·69	35·97	
Cannot read.....	15·11	11·86	

\* In Ireland the proportion married to the population above 17 years of age is,

In the Rural Districts .....	51 males, 50 females
In the Civic do. ....	53 „ 43 „
In the whole of Ireland .....	51 „ 49 „

The district in which the highest proportion of the male population above the age of twenty-one can either read or write is the urban portion of Port Philip, in which the ratio is 91·70, and the lowest appears in the Commissioners' District, which is represented by 70·66 per cent. With respect to the female population, aged twenty-one and upwards, the highest proportion is also to be found in the Urban district of Port Philip, and likewise the lowest, as in the case of males in the Commissioners' Districts, the ratio being respectively 86·11 per cent. and 70·30 per cent. Again, with respect to the male population between the ages of six and twenty-one, the highest and lowest proportions able either to read or write are to be found in the same two districts, the Urban district of Port Philip, in which the ratio is 97·40, and the Commissioners' District, 66·21 per cent., showing a remarkable disparity. The highest and lowest for the female sex are to be found in the towns and villages, and in the Commissioners' Districts, the ratio in the former being 100 per cent. and in the latter 67·23 per cent.

Thus far it will be seen that education is more prevalent among the population between the ages of six and twenty-one than among that of twenty-one and upwards. The proportion that cannot read at the younger ages being for

Ages 6 to 21.....	15·11 males, 11·86 females.
„ 21 and upwards .....	22·12 „ 23·24 „

and it will further appear that a greater proportion of males are completely uneducated at the younger ages, but of females at the superior ages.

Again, if the higher test of being able both to read and write be substituted for the inferior test of being able to either read or write, the following results are obtained.

Can both read and write, ages 6 to 21.....	53·20 males, 52·17 females.
„ „ 21 and upwards ....	65·97 „ 55·42 „

showing that so far as this test is applicable, males at both the inferior and superior ages are better educated than the other sex.

The district which stands lowest in respect of this latter test, when applied to the up-grown male population, is the Commissioners' Districts, and the highest is the urban portion of the Port Philip district, the ratios being 58·61 and 83·40 respectively. For the female sex the districts are the same in order, and the ratios respectively 51·24 and 65·68 per cent. And as to the younger population the lowest and highest ratios for the male sex are 38·44 and 67·47 per cent. to be found in the Commissioners' Districts and the city of Sydney, and for the female sex the lowest and highest are in the Commissioners' districts and in the towns and villages, the ratios being 32·99 per cent. in the former, and 62·70 in the latter.

One uniform result is, however, observable throughout the whole returns. Invariably it will be found that applying either test, education is more general in the Urban districts than in the whole population, thus:—

	Males per cent.		Females per cent.	
	Whole Population.	Urban District.	Whole Population.	Urban District.
Can read and write, from ages 6 to 21 .....	53·20	66·24	52·17	60·71
"          "          " 21 and upwards.....	65·97	76·08	55·42	60·88
Can either read or write, from ages 6 to 21 .....	84·89	95·66	88·14	95·75
"          "          " 21 and upwards....	77·88	85·63	76·76	81·29

This more general diffusion of the rudiments of education will be found common to all the groups composing the Urban districts.

Being on this subject it may be worth while to refer to Ireland, for which very precise information was collected at the period of last census, on the 5th June, 1841. The same facts were observable in that country also, showing the greater prevalence of education in the Urban districts. The following abstract will give the relative amount of education in that country generally.

Age.	Per centage of the Population at the respective Ages,							
	Who can Read and Write.		Who can Read only.		Who can either Read or Write.		Who cannot Read or Write.	
	Males.	Females	Males.	Females	Males.	Females	Males.	Females
5—10 .....	8	6	16	15	24	21	76	79
11—15 .....	35	22	23	28	58	50	42	50
16—25 .....	47	27	18	28	65	55	35	45
26—35 .....	46	21	16	24	62	45	38	55
36—45 .....	46	19	15	22	61	44	39	59
46—55 .....	44	17	13	19	57	36	43	64
56—65 .....	40	14	12	17	52	31	48	69
66—75 .....	42	15	12	19	54	34	46	66
76—85 .....	39	14	12	18	51	32	49	68
86—95 .....	38	16	12	17	50	33	50	67
above 95 .....	28	9	9	10	37	19	63	81
Ages not specified .....	29	20	9	13	38	33	62	67
Total .....	37	18	17	23	54	41	46	59

The preceding table is very instructive in respect to the progress of education in Ireland during the last eighty years, showing in that period an almost uniform increase of the numbers who can either read or write of from 37 per cent. to 65 per cent. The facts furnished by the Irish census would afford much matter for interesting reflection, but the present object in bringing forward the facts connected with that country is simply to show the relative degree of education there and in New South Wales.

The next part of this paper to which attention will be directed is the civil condition of the population. The facts on this part of the subject are embodied in Table IV. It will be seen that of the male population 93·641 per cent. is "free," and 82·334 per cent. born in the colony, or arrived "free," and therefore 11·307 per cent. must have been liberated. Of the 6·658 per cent. which composed the "bond" population

3·048 per cent. hold Tickets of Leave,

2·906 " are in Government Employment, and

·404 " are in Private Assignments.

It will be found that of the whole female population 98·585 per cent. is free, and 93·821 per cent. were born in the colony or arrived there free. The remaining 1·413 per cent. which represents the female “bond” population is disposed of in the following manner.

0·577	per cent.	hold Tickets of Leave,
0·553	„	are in Government Employment, and
0·283	„	are in Private Assignments.

An inspection of Table V. will show that of the whole population,

	Males.		Females.
There was born in the Colony .....	27·730	per cent. ....	41·716
„ England .....	36·566	„ ....	21·627
„ Wales .....	0·397	„ ....	0·287
„ Ireland.....	24·413	„ ....	26·811
„ Scotland .....	8·142	„ ....	7·266
„ other British Dominions ....	1·734	„ ....	1·810
„ Foreign Countries .....	1·018	„ ....	0·482

Hence a greater proportion of the female than of the male sex has been born in the colony. Of the males born out of the colony the greatest proportion is from England, but of the females the highest ratio is from Ireland. The next in order for both sexes is from Scotland, but a very small proportion only from Wales, being 0·397 per cent. males, and 0·287 per cent. females.

The classification given of the occupation of the population is very defective, and chiefly so from the female sex not being distinguished, except in one instance. The results will be found in Table V., in which it will appear that 98,602, or 52·60 per cent., of the whole population is undescribed.

4·94 is engaged in Commerce, Trade, and Manufactures

7·44 „ Agriculture

7·22 „ Grazing

0·50 „ Horticulture

6·46 „ as Other Labourers

5·75 „ in Mechanics and Arts

2·23 { Males } as Domestic Servants

3·44 { Females }

0·10 „ Clerical Profession

0·15 „ Legal „

0·19 „ Medical „

0·93 „ Other Educated Persons

0·90 „ Alms-people, Pensioners, Paupers, &c

4·17 „ All other Occupations

52·60 „ Residue of Population. (which no doubt includes the great bulk of the female as well as all the juvenile population.)

It is stated that in the year 1828 the population of New South Wales was 36,598; in 1833 it was 60,794; and in 1836 the population was 77,096; but the population was, in

1841 .....	87,298	males, and	43,558	females =	130,856
1846, 2nd March .....	112,573	„	74,840	„ =	187,413
Crews of Colonial Vessels in } Harbour or at Sea .....	2,196	„	—	„ =	2,196
Gross increase of Population } during the 5 years .....	27,471	„	31,282	„ =	58,753
Ratio of increase during the } 5 years.....	31·46	„	71·81	„ =	41·89

It will thus be seen that should the same causes prevail for the next ten years, as those acting on New South Wales, during the last quinquennial period, that the population during that term will be doubled.

TABLE I.—POPULATION.

## AGE AND SEX.

Ages.		20 Counties in Sydney.	Stanley and Auckland.	Commissioners' Districts.	Total of the Middle District.	Port Philip District.	Total of New South Wales.	City of Sydney.	Suburbs of Sydney.	Towns and Villages.	Total Urban Population of Sydney.	Urban District of Port Philip.	Total Urban District of New South Wales.
Number of Males.	Under 2 years	5,561	120	512	6,193	1,691	7,884	1,379	319	1,095	2,823	874	3,697
	2 & under 7	10,836	190	858	11,884	2,520	14,404	2,915	617	1,903	5,435	1,306	6,741
	7    "   14	8,529	119	560	9,208	1,500	10,708	2,257	457	1,434	4,148	791	4,942
	14   "   21	5,505	70	511	6,086	989	7,075	1,704	241	860	2,805	428	3,233
	21   "   45	37,459	1,201	8,151	46,811	12,198	59,009	9,957	1,539	7,907	18,593	4,147	22,740
	45   "   60	8,344	159	1,069	9,572	1,122	10,694	1,961	273	1,348	3,582	342	3,924
	60 & upwards	2,467	16	152	2,635	164	2,799	637	70	470	1,477	65	1,542
Total .....		78,701	1,875	11,813	92,389	20,184	112,573	20,810	3,546	14,207	38,563	7,956	46,519
Number of Females.	Under 2 years	5,639	95	467	6,201	1,689	7,890	1,339	319	1,085	2,743	901	3,644
	2 & under 7	10,916	153	854	11,933	2,465	14,398	2,926	603	1,875	5,404	1,317	6,721
	7    "   14	8,218	96	438	8,752	1,352	10,104	2,315	462	1,495	4,272	806	5,078
	14   "   21	6,057	45	284	6,386	1,001	7,387	2,292	353	1,007	3,652	634	4,286
	21   "   45	22,523	360	1,678	24,561	5,754	30,315	7,443	1,345	4,876	13,164	3,195	16,359
	45   "   60	3,229	63	119	3,411	393	3,804	952	170	539	1,661	203	1,864
	60 & upwards	883	...	18	901	41	942	281	31	158	473	29	502
Total .....		57,495	812	3,538	62,145	12,695	74,840	17,548	3,286	10,535	31,369	7,085	38,454
Per Centage of Males.	Under 2 years	7.066	6.400	4.334	6.703	8.377	7.003	6.626	9.842	7.707	7.320	10.985	7.947
	2 & under 7	13.768	10.133	7.263	12.863	12.485	12.795	14.008	17.400	13.395	14.094	16.415	14.491
	7    "   14	10.837	6.347	4.740	9.967	7.431	9.512	10.846	12.887	10.094	10.756	9.980	10.621
	14   "   21	6.995	3.733	1.325	6.587	1.900	6.284	8.188	6.796	6.053	7.273	5.380	6.949
	21   "   45	47.596	64.053	69.000	50.667	60.431	52.418	47.847	13.401	49.954	48.214	52.124	48.883
	45   "   60	10.602	8.480	9.049	10.360	5.559	9.499	9.423	7.699	9.488	9.288	4.299	8.433
	60 & upwards	3.134	8.53	1.287	2.852	812	2.486	3.061	1.974	3.308	3.052	817	2.669
Per Centage of Females.	Under 2 years	9.807	11.699	12.168	9.977	13.304	10.543	7.630	9.707	10.299	8.744	12.717	9.476
	2 & under 7	19.038	18.842	21.730	19.202	19.417	19.239	16.674	18.351	17.798	17.227	18.589	17.478
	7    "   14	14.295	11.823	11.412	11.083	10.659	13.501	13.192	14.060	11.191	13.619	11.376	13.205
	14   "   21	10.535	5.542	7.399	10.276	7.885	9.870	13.061	10.742	9.558	11.642	8.948	11.146
	21   "   45	39.174	41.335	43.721	39.522	45.325	40.506	42.115	40.931	41.588	41.965	45.095	42.542
	45   "   60	5.616	7.759	3.101	5.489	3.096	5.082	5.425	5.173	5.116	5.295	2.865	4.847
	60 & upwards	1.535	...	469	1.450	323	1.238	1.601	1.035	1.500	1.508	409	1.305
Ratio of Females to Males.	Under 2 years	101.40	79.17	91.21	100.13	99.85	100.08	97.10	91.40	99.09	97.17	103.19	98.57
	2 & under 7	101.02	80.53	97.20	100.41	97.82	99.96	100.38	97.73	98.53	99.43	100.81	99.56
	7    "   14	96.35	80.67	78.21	95.05	90.13	94.36	102.57	101.09	101.25	102.99	101.76	102.75
	14   "   21	110.03	64.29	55.58	104.93	101.21	104.41	134.51	146.47	117.09	130.19	118.13	132.57
	21   "   45	60.13	29.98	20.59	52.47	47.17	51.37	74.75	87.39	61.66	70.80	77.04	71.94
	45   "   60	88.70	39.62	11.13	35.64	35.03	35.59	48.55	62.27	39.99	46.37	59.36	47.50
	60 & upwards	35.79	...	11.84	34.19	25.00	33.66	44.11	48.57	33.62	40.19	44.61	40.12
Total .....		73.05	43.31	32.49	67.26	62.90	66.48	84.32	92.66	71.15	81.34	89.05	82.66

TABLE II.

## MALES.

DISTRICTS.	SOCIAL CONDITION.				
	Married.		Single.		Ratio of the Married to Population above 14.
	Number.	Per cent.	Number.	Per cent.	
20 Counties in Sydney .....	23,283	29·58	55,418	70·42	43·30
Stanley and Auckland .....	436	23·25	1,439	76·75	30·15
Commissioners' Districts .....	1,854	15·69	9,959	84·31	18·76
Total of the Middle District .....	25,573	27·68	66,816	72·32	39·28
Port Philip District .....	5,564	27·57	14,620	72·43	38·44
Total of New South Wales .....	31,137	27·66	81,436	72·34	39·13
City of Sydney .....	7,072	33·98	13,738	66·02	49·60
Suburbs of Sydney .....	1,356	38·24	2,190	61·76	63·87
Towns and Villages .....	4,171	29·36	10,036	70·64	42·67
Total of the Urban District of Sydney .....	12,599	32·67	25,964	67·33	48·17
Urban District of Port Philip .....	2,885	36·26	5,071	63·74	57·31
Total of the Urban District of New South Wales .....	15,484	33·29	31,035	66·71	49·73

## FEMALES.

20 Counties in Sydney .....	23,289	40·51	34,206	59·49	71·24
Stanley and Auckland .....	410	50·49	402	49·51	87·61
Commissioners' Districts .....	1,785	46·51	2,053	53·49	85·04
Total of the Middle District .....	25,484	41·01	36,661	58·99	72·28
Port Philip District .....	5,656	44·55	7,039	55·45	78·68
Total of New South Wales .....	31,140	41·61	43,700	58·39	73·36
City of Sydney .....	7,208	41·08	10,310	58·92	65·72
Suburbs of Sydney .....	1,379	41·97	1,907	58·03	72·50
Towns and Villages .....	4,216	40·02	6,319	59·98	69·34
Total of the Urban District of Sydney .....	12,803	40·81	18,566	59·19	67·56
Urban District of Port Philip .....	3,031	42·78	4,054	57·22	74·64
Total of the Urban District of New South Wales .....	15,834	41·18	22,620	58·82	68·81



TABLE III.—EDUCATION OF FEMALES.

DISTRICTS.	From Ages 6—21.						From Ages 21 and upwards.						Cannot Read.						
	Population from 6-21.	Read only.	Per Cent.	Read and Write.	Per Cent.	Can either Read or Write.	Per Cent.	Population above 21 years of age.	Read only.	Per Cent.	Read and Write.	Per Cent.	Can either Read or Write.	Per Cent.	Population under 6.	Cannot Read under 21.	Per Cent.	Difference who can not read from 6-21.	Per Cent.
20 Counties in Sydney	16,356	5,775	35.31	8,709	53.25	14,181	88.56	26,635	5,792	21.75	11,309	53.72	20,101	75.47	11,501	16,376	53.07	1,822	11.41
Stanley and Auckland	172	81	47.09	77	44.77	158	91.86	423	71	16.79	265	62.61	336	79.43	217	231	59.38	14	8.14
Commissioners' Districts .....	885	303	34.24	292	32.99	595	67.23	1,815	346	19.06	930	51.24	1,276	70.30	1,138	1,428	70.59	290	32.77
Total of the Middle District .....	17,413	6,159	35.37	9,978	52.13	15,237	87.56	28,873	6,209	21.50	15,504	53.70	21,713	75.20	15,859	18,035	51.21	2,174	12.50
Port Phillip District ..	2,871	1,138	39.60	1,506	52.40	2,611	92.00	6,188	1,271	20.59	3,926	63.41	5,200	84.03	3,633	3,803	59.37	230	8.00
Total of New South Wales .....	20,288	7,297	35.97	10,584	52.17	17,881	88.11	35,061	7,433	21.34	19,430	55.42	26,913	76.76	19,401	21,808	55.05	2,407	11.86
City of Sydney .....	5,142	1,690	32.87	3,139	61.04	4,820	93.91	8,676	1,684	19.41	5,339	61.51	7,023	80.95	3,730	4,043	46.57	313	6.09
Suburbs of Sydney ..	931	329	35.33	535	57.47	861	92.80	1,549	311	22.01	990	63.92	1,331	85.93	806	873	50.26	67	7.20
Towns and Villages ..	2,873	1,073	37.30	1,802	62.76	2,855	100.00	5,673	1,079	21.27	2,820	55.59	3,809	76.86	2,580	2,587	47.36	..	..
Total of the Urban District of Sydney ..	8,946	3,092	34.56	5,476	61.21	8,508	95.77	15,228	3,101	20.29	9,149	59.81	12,253	80.10	7,125	7,503	46.69	378	4.23
Urban District of Port Phillip .....	1,718	615	37.51	999	58.15	1,644	95.69	3,427	700	20.43	2,251	65.68	2,951	86.11	1,940	2,014	55.06	74	4.31
Total of the Urban District of New South Wales .....	10,665	3,737	35.04	6,475	60.71	10,242	95.75	18,725	3,801	20.32	11,400	60.88	15,201	81.20	9,064	9,517	48.24	453	4.25

TABLE IV.

DISTRICTS.	CIVIL CONDITION.									
	Free.					Bond.				
	Born in the Colony or arrived free.		Other free Persons.		Holding Tickets of Leave.		In Government Employment.		In Private Assignment.	
	No.	Per Cent.	No.	Per Cent.	No.	Per Cent above age 14.	No.	Per Cent. above age 14.	No.	Per Cent. above age 14.
<i>Males.</i>										
20 Counties in Sydney ..	55,790	70·889	15,162	19·265	5,229	6·644	1,941	2·466	579	·736
Stanley and Auckland ..	1,196	63·787	407	21·707	182	9·707	81	4·320	9	·480
Commissioners' Districts ..	5,576	47·202	4,605	38·983	1,475	12·486	34	·288	123	1·041
Total of Middle District..	62,562	67·716	20,174	21·836	6,886	7·453	2,056	2·225	711	·769
Port Philip District ....	17,553	86·965	2,363	11·707	230	1·139	18	·089	20	·099
Total of New South Wales .....	80,115	71·167	22,537	20·020	7,116	6·321	2,074	1·842	731	·649
City of Sydney .....	18,366	88·256	1,731	8·332	94	·451	550	2·643	66	·317
Suburbs of Sydney .....	3,178	89·622	309	8·714	35	·987	..	..	21	·676
Towns and Villages .....	9,117	64·173	2,940	20·694	1,259	8·861	793	5·581	98	·689
Total of the Urban District of Sydney .....	30,661	79·509	4,983	12·805	1,388	3·599	1,343	3·482	188	·487
Urban District of Port Philip .....	7,640	96·028	277	3·481	30	·377	9	·111	..	..
Total of the Urban District of New South Wales .....	38,301	82·331	5,260	11·307	1,418	3·048	1,352	2·906	188	·404
<i>Females.</i>										
20 Counties in Sydney ...	52,656	91·584	3,962	6·891	436	·758	238	·413	203	·353
Stanley and Auckland ...	759	93·473	48	5·911	3	·369	..	..	2	·246
Commissioners' Districts ..	3,533	92·053	275	7·165	18	·469	..	..	12	·312
Total of Middle District..	56,948	91·637	4,285	6·895	457	·735	238	·382	217	·349
Port Philip District ....	12,488	98·370	202	1·591	5	·039	..	..	..	..
Total of New South Wales .....	69,436	92·779	4,487	5·995	462	·617	238	·318	217	·290
City of Sydney .....	16,854	96·022	614	3·499	51	·290	4	·022	25	·142
Suburbs of Sydney .....	3,170	96·470	99	3·012	4	·121	..	..	13	·395
Towns and Villages .....	9,031	85·724	1,060	10·061	164	1·556	209	1·983	71	·673
Total of the Urban District of Sydney .....	29,055	92·623	1,773	5·652	219	·698	213	·679	109	·347
Urban District of Port Philip .....	7,023	99·125	59	·832	3	·042	..	..	..	..
Total of the Urban District of New South Wales .....	36,078	93·821	1,832	4·764	222	·577	213	·553	109	·283



TABLE V.—FEMALES.

DISTRICTS.	COUNTRY WHERE BORN.													
	In the Colony.		In England.		In Wales.		In Ireland.		In Scotland.		In other British Dominions.		In Foreign Countries.	
	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
20 Counties in Sydney .....	25,452	44.268	12,669	22.035	170	.295	14,661	25.500	3,563	6.197	709	1.233	271	.471
Stanley and Auckland .....	332	40.887	164	20.197	4	.493	214	26.355	76	9.360	12	1.477	10	1.231
Commissioners' Districts .....	1,708	44.502	660	17.196	3	.078	1,101	28.687	331	8.624	31	.807	4	.104
Total of the Middle District .....	27,492	44.238	13,493	21.711	177	.283	15,976	25.717	3,970	6.387	752	1.210	285	.457
Port Philip District .....	3,728	29.366	2,693	21.213	38	.299	4,089	32.210	1,468	11.564	603	4.749	76	.598
Total of New South Wales .....	31,220	41.716	16,186	21.627	215	.287	20,065	26.811	5,438	7.266	1,355	1.810	361	.482
City of Sydney .....	6,418	36.574	4,231	24.111	61	.347	5,363	30.562	1,075	6.126	288	1.641	112	.638
Suburbs of Sydney .....	1,171	35.636	1,013	30.828	11	.334	813	24.741	205	6.238	61	1.856	12	.365
Towns and Villages .....	4,733	44.926	2,395	22.734	37	.351	2,610	24.774	589	5.590	124	1.117	47	.446
Total of the Urban District of Sydney .....	12,322	39.281	7,639	24.352	109	.347	8,786	28.009	1,869	5.958	473	1.507	171	.545
Urban District of Port Philip .....	1,953	27.565	1,630	23.006	16	.225	2,359	33.296	687	9.696	382	5.391	58	.818
Total of the Urban District of New South Wales .....	14,275	37.122	9,269	24.104	125	.325	11,145	28.983	2,556	6.646	855	2.223	229	.595

TABLE VI.

DISTRICTS.	OCCUPATION.															
	Commerce, Trade, and Manufacture.		Agriculture.		Grazing.				Horticulture.		Other Labourers.		Mechanics and Artificers.		Domestic Servants.	
	No.	Per cent	No.	Per cent	Shepherds and persons in the management of sheep.	Per cent	Stockmen and Persons in the management of Horses & Cattle.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
20 Counties in Sydney ...	7,805	5.73	11,826	8.68	4,190	3.08	1,903	1.40	793	.58	8,211	6.03	7,866	5.78	2,892	2.12
Stanley and Auckland ...	96	3.57	53	1.97	367	13.66	191	7.11	11	.41	281	10.46	234	8.71	114	4.24
Commissioners' Districts.	126	0.81	437	2.79	4,468	28.55	2,242	14.32	9	.06	1,695	10.83	559	3.57	381	2.43
Total of the Middle Dis- trict .....	8,027	5.19	12,316	7.97	9,025	5.84	4,336	2.81	813	.53	10,187	6.59	8,659	5.60	3,387	2.19
Port Philip District .....	1,237	3.76	1,636	4.98	4,540	13.80	1,196	3.64	130	.40	1,917	5.82	2,110	6.42	801	2.44
Total of New South Wales	9,264	4.94	13,952	7.44	13,565	7.24	5,532	2.95	943	.50	12,104	6.46	10,769	5.75	4,188	2.23
City of Sydney .....	4,211	10.98	62	.16	16	.04	67	.17	82	.20	1,736	4.53	3,118	8.13	959	2.50
Suburbs of Sydney .....	444	6.50	14	.21	3	.04	54	.79	111	1.62	343	5.02	554	8.11	148	2.17
Towns and Villages .....	1,953	7.89	496	2.00	144	.58	182	.74	93	.38	1,745	7.05	2,131	8.61	812	3.28
Total of the Urban Dis- trict of Sydney .....	6,608	9.45	572	.82	163	.23	303	.43	236	.41	3,824	5.47	5,803	8.30	1,919	2.74
Urban District of Port Philip .....	1,017	6.76	86	.57	120	.80	138	.92	48	.32	756	5.03	1,525	10.14	400	2.66
Total of the Urban Dis- trict of New South Wales	7,625	8.97	658	.77	283	.33	441	.52	334	.39	4,580	5.39	7,328	8.62	2,319	2.73

TABLE VI.—Continued.

DISTRICTS.	OCCUPATION.															
	Domestic Servants.		Clerical Profession.		Legal Profession.		Medical Profession.		Other educated Persons.		Alms-people, Pensioners, Paupers, &c.		All other Occupations.		Residue of Population.	
	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
20 Counties in Sydney ....	4,463	3·28	164	·12	214	·16	259	·19	1,392	1·02	1,572	1·15	6,390	4·69	76,256	55·99
Stanley and Auckland ....	118	4·39	1	·04	6	·22	8	·30	33	1·23	...	...	119	4·43	1,055	39·26
Commissioners' Districts .	401	2·56	4	·03	1	·01	14	·09	54	·35	8	·05	161	1·03	5,091	32·52
Total of the Middle Dis- trict .....	4,982	3·22	169	·11	221	·15	281	·18	1,479	·96	1,580	1·02	6,670	4·32	82,402	53·32
Port Philip District .....	1,473	4·48	16	·05	50	·15	62	·19	258	·79	107	·33	1,146	3·49	16,200	49·26
Total of New South Wales	6,455	3·44	185	·10	271	·15	343	·19	1,737	·93	1,687	·90	7,816	4·17	98,602	52·60
City of Sydney .....	1,718	4·48	56	·15	98	·26	102	·27	551	1·44	980	2·55	2,991	7·80	21,611	56·34
Suburbs of Sydney .....	291	4·26	6	·09	43	·63	5	·07	92	1·35	1	0·1	259	3·79	4,464	65·34
Towns and Villages .....	872	3·52	65	·26	47	·19	101	·41	346	1·40	554	2·24	1,568	6·34	13,633	55·10
Total of the Urban Dis- trict of Sydney .....	2,881	4·12	127	·18	188	·27	208	·30	989	1·41	1,535	2·20	4,818	6·89	39,708	56·78
Urban District of Port Philip .....	663	4·41	13	·09	46	·31	44	·29	209	1·39	107	·71	837	5·56	9,032	60·04
Total of the Urban Dis- trict of New South Wales	3,544	4·17	140	·17	234	·28	252	·30	1,198	1·41	1,642	1·93	5,655	6·66	48,740	57·36

TABLE VII.

Ages.	ENGLAND AND WALES.				
	Males.		Females.		Ratio of Females to Males.
	Population.	Ratio per Cent.	Population.	Ratio per Cent.	
Under 2 years .....	423,408	5·449	432,159	5·312	102·067
2 and under 7 .....	1,037,106	13·346	1,046,991	12·869	100·953
7 „ 14 .....	1,248,233	16·063	1,231,637	15·139	98·671
14 „ 21 .....	1,079,075	13·886	1,115,527	13·711	103·378
21 „ 45 .....	2,610,918	33·598	2,833,234	34·825	108·515
45 „ 60 .....	805,975	10·370	853,226	10·488	105·863
60 and upwards .....	530,971	6·833	611,401	7·515	115·148
Ages not specified .....	35,408	·455	11,472	·141	32·399
Total .....	7,771,094		8,135,647		104·691

Ages.	NEW SOUTH WALES.				
	Males.		Females.		Ratio of Females to Males.
	Population.	Ratio per Cent.	Population.	Ratio per Cent.	
Under 2 years .....	7,884	7·003	7,890	10·543	100·08
2 and under 7 .....	14,404	12·795	14,398	19·239	99·96
7 „ 14 .....	10,708	9·512	10,104	13·501	94·36
14 „ 21 .....	7,075	6·284	7,387	9·870	104·41
21 „ 45 .....	59,009	52·418	30,315	40·506	51·37
45 „ 60 .....	10,694	9·499	3,804	5·082	35·59
60 and upwards .....	2,799	2·486	942	1·258	33·66
Ages not specified .....	....	....	....	....	....
Total .....	112,573		74,840		66·48

Ages.	URBAN DISTRICT OF NEW SOUTH WALES.				
	Males.		Females.		Ratio of Females to Males.
	Population.	Ratio per Cent.	Population.	Ratio per Cent.	
Under 2 years .....	3,697	7·947	3,644	9·476	98·57
2 and under 7 .....	6,741	14·491	6,721	17·478	99·56
7 „ 14 .....	4,942	10·624	5,078	13·205	102·75
14 „ 21 .....	3,233	6·949	4,286	11·146	132·57
21 „ 45 .....	22,740	48·883	16,359	42·542	71·94
45 „ 60 .....	3,924	8·435	1,864	4·847	47·50
60 and upwards .....	1,242	2·669	502	1·305	40·42
Ages not specified .....	....	....	....	....	....
Total .....	46,519		38,454		82·66

*The Resources of the Irish Sea Fisheries.* By RICHARD VALPY, Esq.

[Read before the Statistical Section of the British Association at Oxford,  
24th June, 1847.]

THE present condition of Ireland is certainly a great anomaly. That large island is known to possess a soil of superior fertility; with by no means a scanty supply of valuable metals and minerals; with an amount of water power, available for manufacturing purposes, estimated as equal to the power of a million and a quarter of horses; with all parts of the coast abounding in fish of the finest description; with 8,000,000 of inhabitants (a number so far from redundant, that if doubled it would only be in proportion to the present population of the one county of Armagh); and in legislative union with the most wealthy and industrious nation in the world. Possessed of such resources, how can it be explained that, in this its time of famine and disease, it is so destitute of the power to support its own population, as to require the expenditure by the sister island of 10,000,000*l.* sterling, and that partly in providing three millions of rations a-day for its destitute poor?

Few of the resources of Ireland are perhaps more capable of affording extensive and speedy relief than the sea fisheries, as in such industry no delay occurs in the return for the capital and skill applied, and the yield is almost miraculous.

The coasts of Ireland present a general length of 2,346 statute miles, and, with but little variation, abound in all the various kinds of fish in common use. Cod, ling, haddock, hake, mackerel, herrings, whiting, conger, turbot, brill, bream, soles, plaice, dories and salmon, are the sorts most frequently met with; but several others are by no means uncommon, as gurnet, pollock, skate, glassen, sprats, &c.

We find that the value of the Irish fisheries was known both at home and abroad at early periods. In 1673, Sir W. Temple, in a letter to Lord Essex, says that, "the fishing of Ireland might prove a mine under water as rich as any under ground." And, as far back as the 9th and 10th centuries, the Danes are said to have established a fishery on the banks off the western coasts, which enabled them to carry on a lucrative trade with the south of Europe, bringing back wine and other southern productions, in exchange for the produce of the fishery. In Queen Mary's reign, Philip II. of Spain paid 1,000*l.* annually in consideration of his subjects being allowed to fish on the north-west of Ireland. This permission was granted in 1553 for the term of 21 years, and it appears that the money was brought into the Irish exchequer, a reproach, says Wakefield, to the natives at that time for their indolence and inactivity. In 1650 Sweden was permitted, as a favour, to employ a hundred vessels in the Irish fishery. And the Dutch, in the reign of Charles I., were admitted to the fisheries, on the payment of 30,000*l.*

At the present time, by far the largest proportion of the fish caught, is taken in the immediate neighbourhood of the shores; the general character of the boats and gear not allowing the fishermen, even if they had the inclination, to take advantage of the large quantities of fish

which are to be found on the numerous banks lying off all parts of the coast, at various distances of a few miles. These banks, with but few exceptions, vary from one to eight miles in length and breadth.

On the western coast there is a bank of very considerable extent, which stretches, in an oblique direction, nearly from the coast of Galway to Newfoundland, at the depth of twenty to thirty fathoms, and of various breadths from fifty to a hundred miles and more. It is well known to be frequented by myriads of excellent fish of various kinds, and was considered by Mr. Dalton\*, to be capable of easily supplying cargoes for two thousand vessels in a season.

The Nymph Bank, on the southern coast, although less extensive than the great western bank, is a large and very valuable fishing-ground, extending about ten or fifteen leagues, with a uniform depth of about forty fathoms, and of a sufficient size to afford employment to many hundred vessels. Competent authorities have given it as their opinion, that this bank, (which is only 150 leagues from Gravesend,) from its proximity and the excellency of its produce, might afford to the principal English markets, a supply of cod and other white fish very superior in quality to what is now received there. Fast sailing well-boats, favoured by the westerly winds which so much prevail on the coast of Ireland, might in fine weather carry the fish to London in four or five days, whereas the well-boats from the North Sea, and the north-east coast of Scotland, sometimes reach Gravesend with difficulty in as many weeks, with the fish so much bruised and injured by the agitation of the sea, as to be hardly fit for sale.

The cod caught on the southern coast of Ireland are said to be preferable to those caught in the American seas; and Dr. Smith, who wrote a natural history of Waterford, considered that part of the coast to be particularly adapted for the rendezvous and breeding of fish.

A company was formed in Waterford, in 1802, for prosecuting the Nymph Bank fishery with well-boats. The Irish Government encouraged the undertaking, and agreed to give a premium of 10 per cent. on the capital subscribed, and to pay a bounty of 30s. per ton on the vessels employed. But, owing to quarrels amongst the directors and their bad management, the project failed. On the dissolution of the company, one of their vessels, with a skilful skipper, was employed by one of the shareholders, and fished the bank, especially off the Saltees on the Wexford coast, with great success. A cargo was taken to Gravesend in five days and eleven hours, notwithstanding heavy gales off the Land's End, and 35 score of live cod and 66 score of split cod, were sold at Billingsgate. The live cod sold at good prices, and were much esteemed on account of their quality and the good condition in which they appeared, having been all taken within three weeks of the time of their being brought to market; whereas those from the northern fishing-grounds are very frequently six weeks and sometimes two months in the wells.

The master of the boat computed that from the 18th of December, when he returned to Waterford, until the end of April or the middle of May, he could, with the assistance of another vessel, have carried up a cargo of 50 score of live fish to London every month, which at only 5l.

\* Author of "A Survey of Clare."

a score (cod fetching at Billingsgate from 8*l.* to 10*l.* a score about Christmas), would have produced 1,000*l.*

Persons of great experience in the cod fisheries have stated that the fishery for cod might be carried on with great advantage on the coast of Ireland from the month of October until the middle or end of April; after which time the vessels could be employed in the northern seas, where cod is taken in great perfection during the summer.

In the present day, we are not without evidence of the productiveness of the deep-sea fishery on the southern coasts. One of the partners in a small fishery establishment at Dunmore, near Waterford, says in a letter\* dated March, 1844: "The fishing-ground off this coast is excellent, and since its value has been fully ascertained, the number of boats engaged in the fishery has greatly increased. The pier at Dunmore affords such superior accommodation, that it bids fair to become an important and valuable fishing station.

"At one period this year (1844) we reckoned upwards of twenty cutters of 40 to 50 tons each, (some from Dublin, and some from Dartmouth,) besides the local boats; and it is a remarkable, and at the same time a very gratifying circumstance, that since having so many assistants in gathering this rich harvest, the quantity of fish caught by our boats does not diminish, but on the contrary. In proof of this I may state that when we commenced, about a year and nine months ago, we considered 40*s.* worth a good day's fishing; but now, unless it produces 3*l.* or upwards, we look upon it as only so-so. Another pleasing feature is that the demand keeps pace with the supply. England takes all the surplus prime fish, and the other descriptions are now becoming a regular portion of the diet of the inhabitants, and is found not only wholesome but likewise economical.

"The cod of 12 lbs. to 30 lbs. is  $\frac{1}{2}$ *d.* to 1*d.* per lb., and haddock of 8 lbs. to 14 lbs. 2*d.* per lb.; both being as good and cheap food as need be desired.

"The great value of the fishery on this coast has surprised many persons, and as figures in statistics are potent arguments, I may here mention the produce of our boats for the half-year ending the 31st March, 1844.

	Gross Earnings.			After deducting Expenses of Carriage, Commission, &c.					
				Men's Share.			Owner's Share.		
	£	s.	d.	£	s.	d.	£	s.	d.
Boat No. 1.	217	9	6	111	14	6	83	15	10
„ 2.	180	4	0	91	14	2	68	15	8

"Now if the ensuing six months be as profitable, and we have no reason to suppose it will be otherwise, the crew of No. 1 will earn in the year 223*l.* 9*s.*, and of No. 2, 183*l.* 8*s.* 4*d.*, which divided in the accustomed proportions will stand thus:—

\* See Appendix to the Report on the Fisheries,—1843.

	No. 1.			No. 2.		
	£	s.	d.	£	s.	d.
Skipper, $1\frac{1}{4}$ share .....	69	16	6	57	6	4
2nd hand, $1\frac{1}{4}$ „ .....	69	16	6	57	6	4
3rd „ 1 „ .....	55	17	4	47	17	0
Boy, $\frac{1}{2}$ „ .....	27	18	8	22	18	8
<hr/>						
And the owners will receive .....	223	9	0	183	8	4
	167	11	8	137	11	4
<hr/>						
Making the total net earnings in the year	391	0	8	320	19	8

“If we deduct 50*l.* from the earnings of each boat for wear and tear, and supposing the boats to cost 500*l.* each, which is considerably more than we paid for them (one of 32 tons, and the other 36.) No. 1 will pay  $23\frac{1}{2}$  per cent., and No. 2,  $17\frac{1}{2}$  per cent. in the year, the two averaging  $20\frac{1}{2}$  per cent. And further, if we only suppose there were twenty such boats belonging to Dunmore, and I see no reason why there should not be twice or thrice that number, and taking them to be as successful as those mentioned above, there would then be a sum of upwards of 4,000*l.* to be divided among the crews of these twenty boats, say sixty men and twenty boys; not to speak of the owners’ shares, or the money distributed among the carriers, helpers, basket makers, &c., besides the annual outlay for sails, cordage, twine, boat-builders, &c.”

About a twelvemonth after the date at which the above extracts were written, the Fishery Commissioners, in their annual report, speak thus of the deep-sea fleet at Dunmore:—“The boats of five companies are now steadily engaged in fishing in the same locality; there are twelve very fine cutters, averaging a weekly produce through the year of nearly 100*l.*, being at the rate of 8*l.* 4*s.* per week, and 426*l.* a year for each boat. The whole of the fish is either shipped to the English markets, or sold at Dunmore and Waterford as it is taken from the boats; and it is rather a singular fact that the demand is now more steady and more equal than when the undertaking was commenced, with only three vessels”—about two years previously.

“The great majority of the crews are now natives, and having once acquired the necessary skill, from intercourse with the more experienced hands who had been brought over from England, they are infinitely preferred, as more sober and orderly in their habits than their more skilful shipmates. Dealers and exporters in numbers have sprung up in Waterford, and the companies are no longer obliged to trouble themselves about the disposal of the fish. On the average of three years, the returns to one company have exceeded 15 per cent. on the capital invested.”

No statistics exist to show the quantities of white or other fish now taken on the Irish coasts, but some idea of the produce that might be obtained may be formed by the aid of the following table, which exhibits the quantities of the various kinds of white fish dried in Ireland under the bounty system, from 1819 to 1829.

Years.	Cod.	Ling.	Hake.	Haddock.	Glassen.	Conger.	Total.
	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.
1819.....	5	1	37	....	768	....	811
1820.....	1,650	4,510	6,312	25	4,082	1,117	17,696
1821.....	3,110	6,406	9,393	93	1,628	2,059	22,689
1822.....	3,810	8,572	8,357	126	5,583	1,866	28,314
1823.....	4,564	8,287	14,423	358	1,434	2,356	31,422
1824.....	3,682	5,231	10,599	325	1,347	3,700	24,884
1825.....	3,638	7,462	15,311	282	2,456	5,682	34,831
1826.....	4,701	9,461	10,502	502	4,225	4,427	33,818
1827.....	4,148	5,322	24,321	450	2,736	3,827	40,804
1828.....	5,338	6,648	16,328	171	8,097	3,166	39,748
1829.....	8,960	6,781	32,159	573	8,046	3,858	60,377

These results will appear by no means insignificant, even if placed in comparison with the following statement of the quantities of fish cured in Great Britain in each of the last five years when bounties were paid.

Years.	Cod, Ling, or Hake, Cured.		
	Dried.		Cured in Pickle
	cwts.	cwts.	Barrels.
1826 .....	69,136	3,634	5,621
1827 .....	95,161	9,273	9,025
1828 .....	82,515	6,726	6,142
1829 .....	81,321	5,786	6,819
1830 .....	101,914	5,652	8,836

There is doubtless a wide difference in the produce of the two countries in the same years, but we must not forget the still greater difference which exists in the means of the respective countries for prosecuting that particular industry. The natural resources may vary little, but Scotland, the principal seat of the British fishery, has greatly the advantage of Ireland, in more abundant capital, better and more general harbour accommodation for boats, a larger number of curing-establishments, and more experience and skill on the part of the fishermen.

The Herring-fishery of Ireland appears to have suffered a more extensive decline than any other branch of the fisheries. It is there, no doubt, as in other countries, the most variable kind of fishery; but we think the falling off of the produce may be more correctly ascribed to the confinement of the fishery to the immediate neighbourhood of the shores than to the uncertainty of the visits of the herring. For although the shoals may not regularly frequent the same localities year after year, the herrings are still to be met with in the deep seas, and in the same abundance.

We find that the herring-fishery was very productive in the early and middle parts of the last century, but it rapidly decreased at the close of that period. In 1784, 35,414 barrels, valued at 35,414*l.*, were exported; whereas six years afterwards, in 1790, the exports

were only 1,391 barrels. The trade did not rally again for some years, until towards the end of the bounty system, the returns for which time, however, must not be considered without bearing in mind the frauds then practised, of introducing as Irish produce fish of foreign origin.

The quantities of herrings cured in Ireland for the bounties, in each year from 1819 to 1829, were as follow:—

Years.	Herrings.	
	Gutted with Knives.	Otherwise Gutted.
	Barrels.	Barrels.
1819 .....	217	976
1820 .....	7,018	735
1821 .....	9,464	262
1822 .....	12,112	146
1823 .....	27,551	306
1824 .....	41,570	63
1825 .....	36,957	26,186
1826 .....	26,186	512
1827 .....	15,737	47
1828 .....	13,513	....
1829 .....	16,855	....

The herring-fishery is now chiefly carried on at Galway, Killebegs on the Donegal coast, Mayo, the estuary of the Shannon, the coast between Dingle Bay and Kenmure, Bantry Bay, Waterford, and from Mizen Head to Cahere Point on the Wicklow coast. Herrings may be taken in the winter and summer, but the fishery is generally carried on in the former season.

A small portion only of the persons employed in the Irish fisheries follow fishing as their sole occupation, and therefore the agricultural operations of summer may be a prominent cause for winter being the principal period for the fishery. It is nevertheless a misfortune that such is the case, as the summer fishery is highly recommended, both on account of the supply being more sure and steady, and the quality of the fish superior. Herrings are said to sell higher for the Baltic market in July than at any other time of year, as they have then no appearance of roc, and are very rich. In the beginning of summer herrings sell for 10s. the hundred, and afterwards the price falls to 3s. or 2s. 6d.

English boats are engaged in the summer fishery in the Irish Channel. In the evidence taken in 1836, it is stated that about one hundred boats from Penzance go to Ardglass on the north-east coast, every season, and remain about three months, arriving in June and departing at the end of August for the pilchard-fishery. These boats have received 100*l.* a month for herrings; but the men consider the season a good one if they have more than 20*l.* to carry home.

Of the herrings thus taken, large quantities are purchased and taken by Irish boats, from Skerries, near Dublin, to Liverpool. The herrings are sold to the Skerries men at 4s. a hundred, and are resold in Liverpool at 6s. to 12s. a hundred. In 1836 a fish factor in Liverpool stated that his sales of herrings from the 21st of June to the 1st

of October, 1835, amounted to 12,237*l.*, and that the fish were generally of the finest quality. From May to July, before lamb becomes plentiful, herrings are considered the greatest luxury throughout the manufacturing districts of Lancashire. The demand for them in the towns of Liverpool, Manchester, Bolton, &c., is unbounded, and at that period they are worth 10*s.* a hundred, if brought in good condition. There was another fish factor in Liverpool doing the same amount of business in 1836.

The testimony to the superior qualities of the Irish herring is general and striking. Mr. Wetherall, of the custom-house, Dublin, in 1795, says in reply to queries from the Board of Trade:—"I understand that Irish cured herrings are esteemed to answer the home consumption better than the foreign, being larger and of a more delicate quality, and being considered as much better food for the manufacturer and labourer."

The following extracts from the evidence before the Commissioners in 1836, are to the same purport:

COUNTY DOW. ....	The herrings are of a large fine species.
COUNTY DONEGAL.	The Irish herrings are much better in quality, and bring higher prices in the Scotch markets than herrings caught in Scotland.
"	Herrings large and of very fine quality.
"	The herrings taken at Killybegs are of a much better quality than those taken in Scotland.
"	The quality of the herrings on this coast is remarkably fine.
COUNTY GALWAY.	The harvest herrings are superior to those of winter, and equal to the best loch herrings of Scotland.
"	The herrings are of fine flavour and quality.

We give another extract from the same evidence, to illustrate the violent fluctuations experienced, when the fishing is dependent on the close approach of the herrings to particular parts of the coast:

"For some years, between 1783 and 1790, the herring-fishery at Rutland, county Donegal, was so extensive that 500 vessels were generally loaded every year. The herrings were large; 500 would fill a barrel, and they were of very fine quality. At that time 900 of the Killybegs herrings would be required to fill a barrel. The herrings of Rutland were, for the last four or five years of the fishery, taken in less quantity, and then entirely left the place." This district is thus described in 1836:—"The fishermen have not any fish to sell, none, or very few being taken; and it may be justly said of poor people here, that they are starving in the midst of plenty, seldom eating anything but potatoes and salt." A harbour and various buildings were constructed on Rutland Island, but are now covered with sand. In January, 1836, the herrings re-appeared in great abundance at Rutland. Had the fishermen at Rutland been able to follow the herrings to sea, in all probability their success would have been as great as when the shoals frequented the coast. Wakefield also mentions the failure of the establishment on Rutland Island. "A gentleman," he says, "laid out 38,000*l.*, in addition to a Parliamentary grant of 20,000*l.* in the establishment of a fishing village, but although the undertaking proved so successful at first, as sometimes to give employment to 300 vessels and 1,200 boats, and that 135,000*l.* was received in cash in the course of two months, the herrings disappeared, and the whole scheme entirely failed."

A deep-sea fishery for herrings is not only strongly recommended by the successful example of foreign countries, but, for several reasons, it is more advantageous than the uncertain fishery which is dependent on the shoals frequenting the coasts.

Fraser advocates a deep-sea fishery, because the earliest herrings are there caught; and besides their being earlier, the herrings are fuller in flesh, in more perfection, and cure much better. "Such a fishery," he further adds, "might be carried on with perfect certainty every year, whereas the migratory shoals of herrings do not every season return to the same shores or bays, where they are usually expected, and sometimes for years together are found not to resort to any part of the shore of even an extensive line of coast."

The Dutch, in their more fortunate days, when at liberty to carry on the herring-fishery unrestrained, did not seek for these fish on their own coast, but proceeded to the North Sea, and the neighbourhood of the Shetland Islands; remaining out for many weeks, and pursuing the herrings in their course as they proceeded towards the south. Had they waited on their own shores until the fish entered their nets, they never would have carried this branch of industry to such an extent as to render it one of the chief sources of the opulence of their country.

The Swedish fishermen also sail sometimes to the distance of forty miles to pursue their occupation with more advantage, and remain out several days and nights even in the severest weather.

Besides the large supplies of excellent white fish and herrings of which the Irish seas can boast, many kinds of flat fish, of an equally fine and large description, are to be found there also. And both lobsters and crabs are by no means strangers to several parts of the coast. To persons accustomed to the small supply and high price of turbot in the London market, the following portions of evidence on that branch of the Irish fisheries may excite some degree of surprise.

COUNTY DOWNS....	Turbot are so abundant in Dundrum Bay, that they are speared close to the dry strand.
„ GALWAY.	Turbot of from 14 to 20 lbs. are sold at from 8d. to 1s. each.
„ CLARE ....	Turbot and other flat fish are abundant.
„ KERRY ...	There is a most excellent turbot bank near the markets. 25 to 28 fine large turbot were caught by the Coast-Guard officer, with a small spillard, in one tide, some of them weighing from 20 to 30 lbs.

The Irish soles have favourable testimony bestowed on them also. "On the Kerry coast," it is said, "black soles, the finest in the world, are sold to the jolters at from 1½d. to 4d. the pair."

A few extracts from the evidence will suffice to show how much profitable employment might be obtained by prosecuting the lobster-fisheries.

COUNTY ANTRIM.	Both lobsters and crabs exist in sufficient abundance to create a very lucrative fishery.
„ DONEGAL.	C. killed from 20 to 30 dozen lobsters a-day off Culdaff, and the fishery may be much extended.
„ WEXFORD.	The lobster-fishery of Kilmore is very important, and may be rendered a valuable source of wealth and employment by proper regulation.

There is still another branch of the Irish fisheries deserving of notice, and to which the English markets are indebted for a considerable supply of very fine salmon.

Previous to the passing of the present Fishery Laws the salmon-fisheries of Ireland were in a very neglected state, and the Commissioners, in their Report on those fisheries in 1844, remark that they never did up to that time, nor do they even now, as a whole, yield more than a small proportionate part of that value of which they are capable under a proper system. To discover and establish that system, especially as regards the important and much vexed question of the close season, a question of dispute, doubt, and difficulty, for more than two hundred years, has been a source of considerable labour and investigation to the Commissioners.

In the Report of 1844-1845, no fewer than fifty-six rivers are enumerated as localities where salmon are taken. We subjoin the names of the principal rivers, with the probable present gross produce of fish.

Rivers.	Fishing Districts.	Produce.		
			Tons.	Cwts.
Foyle .....	Carne .....	about 80,000 salmon, or....	220	0
Bann .....	Ballycastle.....	average of 6 years .....	51	1
Bush .....	Do. ....	" 4 " .....	10	7
Ballycroy .....	Belmullet .....	" 3 " .....	26	0
Ballinahinch .....	Clifdon .....	about .....	23	0
Renvyle Fishery.....	Do. ....	" .....	10	0
Bundrowes .....	Sligo .....	" .....	10	0
Blackwater .....	Youghall .....	from £3,500 to £4,000.		
Barrow .....	Waterford.....	about £17,000 to £18,000.		
Nore.....				
Suir .....				

The total produce of salmon in Ireland is not exactly known, we believe, but as far as we can gather from evidence taken throughout the country in 1844, it appears then to have been about 500 tons annually, which at an average price of 8*d.* per lb., would represent a value of 37,333*l.* Large quantities are exported from places having steam communication with England, and judging from the particulars we have been able to gather, the export may be considered to exceed half the produce.

Messrs. Keays exported the following quantities of salmon from Cork in 1842, 1843, and 1844.

	Number of Boxes and Kits.	Number of Salmon and Peal.	Gross Weight.
1842.—Period 10 Months.			
Raw Salmon—Iced .....	Boxes..... 3,811	56,937	Tons. 170
Manufactured .....	Kits ..... 3,529	15,744	46
Total ....	....	72,681	216

	Number of Boxes and Kits.	Number of Salmon and Peel.	Gross Weight.
1843.—Period 6 Months.			
Raw Salmon—Iced .....	Boxes..... 2,766	38,980	Tons. 124
Manufactured.....	Kits ..... 2,873	14,914	39
Total .....	....	53,894	163
1844.—Period 6 Months.			
Raw Salmon—Iced .....	Boxes..... 2,330	33,815	104
Manufactured.....	Kits ..... 2,449	11,665	31
Total .....		45,480	135

Other parties in Cork are reported as having exported as much as the above.

Mr. Keays states that the export of salmon from Cork has been increasing, but the fishery has not been carried on as extensively as it ought. The exports of salmon from Waterford in the seven months from February to August 1844, amounted to 20,852 fish, of 67 tons 14 cwt., in weight; averaging from 6lbs. to 11½ lbs. each.

For the sake of comparison we have extracted from Mr. McCulloch's "Account of the British Empire," the following statement of the quantities and average value of salmon packed in ice, imported into London from Scotland, in each year from 1837 to 1841.

Years.	Quantities.	Average Prices.	Total Value.
	Tons.	d.	£
1837 .....	1,615	10 per lb.	150,750
1838 .....	1,070	10½ "	104,160
1839 .....	817	11 "	83,880
1840 .....	758	11 "	77,850
1841 .....	1,425	8¾ "	116,400

The practice of icing fish for export is now very common, but it may not be generally known that the Chinese appear to have been the first to adopt that method of preserving fish in a marketable state. Wakefield gives the following extract on the subject from Duhamel's "Traité des Pêches," published in 1772: "On sçait qu'à la Chine, on forme sur des bateaux des espèces de glaciers, au moyen desquelles on transporte à Canton des poisson frais et bon à manger, qu'on a pris dans des provinces fort éloignées."

The condition of the salmon fisheries of Ireland has occupied much of the attention of the Fishery Commissioners. In 1844 they instituted an inquiry into, and took evidence as to, the general state of the fisheries throughout the country, and considerable pains were taken to ascertain the proper period for the close season, on which the future prosperity of the salmon fishery almost entirely depends. In proof of the benefits that will result from the adoption of, and steady perseverance

in a judicious system of protection, it is stated that the produce of the Foyle has been raised from an average of 43 tons previous to 1823, to a steady annual produce of nearly 200 tons, and very nearly to 300 tons in the year 1842. And the produce of the small river Newport, County Mayo, has been increased from half a ton or a ton in a season, to 8 tons of salmon and 3 tons of trout for the season ending the third year, after strictly enforcing the protection provided for in the Act of 1842.

In consequence of the comprehensive inquiries instituted by the Fishery Commissioners in 1844 and 1845, and the suggestions in their Report of 1845, it was enacted in the Session of 1846, that the close time for salmon in the sea and tideways should be from the 1st September to the 31st January inclusive; and in rivers or lakes above tideways from the 1st October to the last day of February inclusive; and further that in September salmon should be only taken by rod and line in rivers or lakes above tideways.

Having now detailed the different branches of the Irish fisheries, and considered their respective capabilities, we proceed to show the amount of employment afforded by them. The earliest record that we have been able to meet with of the number of persons employed in the fisheries, is a return about the year 1812, of the Irish Sea Fencibles, exhibiting a total of 9,911 men, which Wakefield says included all the fishermen of Ireland. From 1812 there is no further return until 1821, when the Fishery Board reported the number of fishermen to be 36,159. The difference in the numbers for these two periods is very great, and although the data will not warrant any strict comparison, we may still assume that more persons were engaged in the fisheries in 1821 than at any previous period. The following table contains the number of boats and men employed in the fisheries from 1821 to the present time, so far as can be ascertained.

Years.	Boats.			Fishermen.
	1st Class.		2nd Class. Without fixed Masts and Rigging.	
	With fixed Masts and Rigging.	Per centage Proportions.		
1821 .....	2,766	36·	4,889	36,159
1822 .....	3,108	33·	6,196	44,892
1823 .....	3,249	31·	7,150	49,448
1824 .....	3,385	31·	7,497	52,482
1825 .....	3,197	30·	7,626	57,809
1826 .....	2,878	24·	9,147	58,044
1827 .....	2,828	23·	9,298	59,321
1828 .....	3,437	28·	9,174	63,421
1829 .....	3,597	28·	9,522	64,771
1836 .....	2,897	27·	7,864	54,119
1843 .....	1,887	12·	14,048	73,979
1844 .....	2,237	12·	15,718	84,708
1845 .....	2,371	12·	17,512	93,073
1846 .....	2,423	17·	11,793	98,538

Hence the number of men increased in the nine years from 1821 to 1829, to the extent of 28,612, or 79 per cent.; the increase from

year to year was greatest from 1821 to 1822, when it amounted to 24 per cent., but that was the first year of the operations of the Fishery Board, and in the subsequent years of that Board's duration, the increase did not exceed 10 per cent. What the actual decrease was on the cessation of the bounties in the beginning of 1830, we are unable to show, but the number of men in 1836 being 9,652, or 18 per cent. less than in 1829, proves that the withdrawal of that aid considerably diminished the number of persons employed. The abolition of the bounty system, however, did not long interfere with the progress of the fisheries, as in 1843, or seven years after 1836, we find 19,860 more men, a difference of 37 per cent.; and if we compare 1843 with 1829, we shall see that there was an increase of 9,208 persons, or 11 per cent., within fourteen years after the bounties ceased. A marked improvement is perceptible in the years 1844 and 1845, of 14 and 10 per cent. respectively, and it cannot but be satisfactory to observe that employment is given to 56,914 additional men in 1845 than in 1821. We have purposely avoided comparing the numbers for 1846 with other years, as we regret to observe that Mr. Barry, of the Department of Fisheries, Dublin, has informed us that "there is every reason to be quite certain that there has been a most deplorable diminution in the number both of vessels and men employed in 1846, an unprecedented mortality consequent on the deepest distress, and an unusually large emigration must have produced a great decrease in their numbers." It is gratifying to remark that the habits and conduct of the fishermen is materially altered for the better, and notwithstanding the increasing introduction of improved modes of fishing, of which great jealousy has hitherto prevailed, and still does to some extent, the twenty-eight registering officers report the general behaviour in their districts as peaceable and orderly, with but five trifling exceptions in 1844, and the same number in 1845. This is a pleasing contrast to the character of the fishermen a few years ago, which is thus alluded to in the official suggestions to the Commissioners for inquiring into the state of the fisheries, in 1836:—"In many parts of the coasts disputes have arisen between the line fishermen and those using trawling or other nets. At the Claddagh (Galway town) an association has long existed among the fishermen, who have a self-appointed chief, and are subject to rules and regulations founded on superstitious and indolent habits, and opposed to many useful and industrious operations. So powerful is this body, that it has been very frequently necessary to check their proceedings by Government armed-vessels."

A glance at the number of boats of each class in the preceding table, will be sufficient to prove how large a proportion of the Irish fishing is necessarily confined to within a short distance from the shores, and consequently, the extraordinary resources of the neighbouring deep seas are barely taxed beyond what is just sufficient to prove their rare abundance. It will be seen that from 1821 to 1829, when bounties were paid, the per centage proportions of first class boats varied from 100 to 200 per cent. above what they were in 1843, 1844, 1845. This arose, no doubt, from the Government money making it just worth the while of capitalists to embark in the fisheries, and

not from any healthy stimulus imparted generally to the industry itself. The comparative higher proportions in 1836 and 1846 do not appear to have been occasioned by an increase in the number of first-class boats, but rather from a reduction in the second class boats, arising perhaps from their unserviceable state, and the want of gear and other necessities. Another circumstance may help to account for the great variation in the proportion of the first to the second class boats, and that is something different perhaps in the modes of classification at different periods.

It seems probable, from the information we have been able to collect, that there are as many, if not more, actual boatmen engaged in the Irish, as in the British fisheries. Such a conclusion appears to be warranted by a comparison of the following figures, which shew the number of boats and persons employed in the Irish fisheries, and in the British cod and herring fisheries, from 1842 to 1845.

Years.	Irish Fisheries.		British Cod and Herring Fisheries.	
	Boats.	Persons.	Boats.	Persons.
1842 .....	...	...	12,405	90,435
1843 .....	15,935	73,979	14,067	98,124
1844 .....	17,955	84,708	14,266	97,521
1845 .....	19,883	93,673	14,649	99,665

Although this return is confined to the British cod and herring fisheries, it may be regarded as closely representing the total number of persons employed in the whole of the British coast fisheries. The British totals include a large proportion of curers and other work-people connected with the business of curing; the actual crews being rather under two-thirds of the whole number, which was thus composed:—

	Fishermen.	Owners and others.	Total.
In 1842 there were.....	54,282	and 36,153 .....	90,435
„ 1843 „ .....	60,457	„ 37,667 .....	98,124
„ 1844 „ .....	59,859	„ 37,662 .....	97,521
„ 1845 „ .....	60,279	„ 38,786 .....	99,065

No distinction is made in the Irish returns to mark the nature of the employment of the persons engaged in the fisheries, but from the nearly total absence in Ireland of establishments for curing the fish, it is evident that the proportions of boatmen to other persons employed must be much higher in the Irish than it is in the British fisheries. And as the total number of persons engaged in the Irish fisheries considerably exceeds the number of British fishermen, we think there is sufficient evidence to establish the fact that there are many more fishermen in Ireland than in Great Britain. Happy would it be for Ireland if the success of her fishermen was at all equal to that of the British; but instead of there being a large export of the produce of her fisheries, cured fish of British taking is imported into Ireland, to the amount of several thousand pounds annually. The following table is a statement of the official value of fish of

British taking imported into Ireland, and of fish of all sorts exported from Ireland, in each year from 1839 to 1846.

Years.	Imports.	Exports.
	£	£
1839 .....	44,614	653
1840 .....	69,972	609
1841 .....	75,944	53
1842 .....	69,631	280
1843 .....	36,195	2,418
1844 .....	34,677	90
1845 .....	80,728	177
1846 .....	30,701	775

With the evidence of the preceding pages before us, illustrative of the striking capabilities of the Irish fisheries, and the ample means by which they might be worked, the question may naturally arise how it is that so little advantage has hitherto been taken of a provision, at once so bounteous and so easy of attainment. And it may be inquired has the attention of Government been at any time directed to the subject, and means taken to draw capital and enterprise into so important a branch of the national industry. On the last of these queries we may remark that not only have various Government investigations been made as to the condition of the Irish fisheries, but large sums of public money have been lavished on them in the shape of bounties, both before and after the Union. The encouragement afforded by the Irish Parliament is thus alluded to in the Report on the British Fisheries in 1800:—"Your Committee think it probable that the very large bounties given on the herring fishery by the legislature of Ireland, would, in case of that increased intercourse between the countries which may be expected to take place after the Union, give rise to a great variety of difficulties and frauds, unless the systems of the two countries should be assimilated; and as the Irish fishery is, notwithstanding these bounties, in a very declining state, they cannot recommend the adoption of theirs."

We find that from 1801 to 1819, when a Fishery Board was established in Ireland, 92,152*l.* were paid on fishing-boats, cured fish, and fish oil; and that from 1820 to 1830, when that Board was abolished and bounties were discontinued, a further sum of 163,376*l.* was so disposed of; amounting together to a sum of 255,528*l.* which, with 21,256*l.* (granted on foreign cured fish imported, and paid, within a small amount, in the five years from 1807 to 1811), makes a total of 276,784*l.* for the amount paid in bounties during thirty years, from 1800 to 1830, being 9,200*l.* a-year on the average.

These bounties, which failed to establish the fisheries on a permanent footing, were open to the perpetration of great frauds, as many of the herrings exported as Irish produce, only deserved that character from occupying an Irish instead of a Swedish barrel.

The capital which the bounties had attracted to the fisheries from other employment, speedily returned to its former channels on the

discontinuance of Government payments, and the number of boats and persons employed was of course greatly decreased, but probably little distress was the consequence to the Irish themselves, as fishing for the bounties no doubt opened a wide field to British capital and British fishermen.

Since the period of bounties, a large increase has taken place in the number of second-class boats, and in the persons employed, but the fishery appears to be carried on in a very inefficient and spiritless manner, and the produce is very far from what it ought to be.

The absence of a more numerous class of large boats appears in a great measure to be owing to a corresponding absence of safe and well-placed harbours and piers. But this impediment to the progress of the fisheries will now be almost entirely removed, by the liberal grants made in the last two sessions of Parliament in aid of such works. 50,000*l.* were voted in 1846, to encourage the sea fisheries of Ireland by promoting the construction of piers, harbours and other works. The Commissioners of public works in Ireland state, in their Fifteenth Report, on the subject of this grant, that, since the passing of the Act, they have received 125 memorials praying for the erection of works of that nature. Many of these memorials were for inappropriate purposes, but thirty-five projects, estimated to cost 79,815*l.*, were selected as deserving of immediate assistance, and the Treasury have sanctioned grants accordingly to the amount of 47,477*l.*; the remaining 32,338*l.* being provided by the districts or interested proprietors. The locality of these works appears to be judiciously selected, and all parts of the island will be benefited by them, but principally the western and southern coasts. In 1847 a further sum of 40,000*l.* was granted, which if issued in the same proportions to the total estimates, namely 60 per cent., will cause an additional expenditure of 64,000*l.*, making an aggregate of 145,000*l.* to be devoted to these important objects. So large and useful an outlay cannot fail to be highly beneficial to the interests of the fisheries. Indeed, the small but successful fishing companies at Dunmore, to which we have already referred, are a gratifying proof of the good results that will follow the provision of suitable shelter and accommodation for the fishing-boats.

But there are other causes which also tend to check the development of the Irish fisheries, and to overcome which is quite beyond the unassisted power of even the most industrious and skilful class of fishermen.

In many parts of Ireland the roads between the coast and the neighbouring towns and villages, are few and bad; thus many localities which could command an exuberant supply of fish, equal to any demand, are isolated and unable to find a market, and the fishing is confined to the supply of individual necessities, the fishermen having no inducement to extend their operations.

The people have not been backward to avail themselves of improvements in the means of access, and in many places, so favoured, strings of carts may now be seen conveying fish into the interior, with which little or no intercourse formerly existed.

But, perhaps, the Irish fishermen experience a still greater disadvantage from the general want of the common facilities for curing fish. Without such provision they are unable to follow one of the

most valuable branches of their calling, and the deficiency in this respect has been deemed of sufficient importance to justify the aid of Government who have recently set up six model curing establishments. The experiment, although so limited, has we believe given ample proof of the large quantities of excellent store food that could be prepared from a now perishable produce, if the requisite means were more generally at command.

To excite a progressive prosperity in the Irish fisheries evidently requires then, the opening to the fishing stations of every possible source of demand, and the use of all practicable efforts to make the system of curing an essential part of the business of the fisheries.

Although perfectly aware of the many difficulties that must beset the adoption of efficient measures for these purposes, we thought that the demand might be considerably increased by the introduction of fish, two or three times a week, into the workhouse dietaries, and the art of curing very generally diffused by providing means, on the premises of such of the workhouses as might be suitably situated, for the inmates and the fishermen, or other poor persons of the locality, to cure fish for the inland workhouses, or on their own account.

In our search for data on this subject, we discovered, however, that similar suggestions had emanated from the Board of Works in Ireland, and appeared in their published correspondence with the Treasury in 1846. But the attention of Government was at that time more particularly directed to encouraging the business of curing by the establishment of works especially for that purpose; and the important question of supplying fresh fish to the numerous inmates of the workhouses appears to have escaped investigation. The large supply of fish that would be required for the workhouse consumption may not have been immediately apparent, and, therefore, the following illustrations of the demand that might be so created may not be wholly devoid of interest.

On the 27th of March, 1847, 159 buildings in Ireland were in occupation as workhouses, originally constructed to contain 93,860 inmates, but accommodating, at the above date, as many as 113,708 paupers. So far as we have been able to ascertain, 83 of these houses, or about one-half, are situated very near to the coast, or communicate with it by some of the chief channels of inland navigation. The number of inmates in the 83 houses, on the 7th of March, 1847, amounted to 72,403. By taking this number as the basis of our calculations, and allowing 2 lbs. of raw fish for one meal, to each person, (not too large an estimate, perhaps, as bone and all refuse is included,) we should have a weekly consumption of 289,612 lbs. of fish, if given twice in the week, or 434,418 lbs., if served out on three days in each week; these quantities would respectively represent an annual consumption of 15,054,624 lbs. and 22,589,736 lbs.

It would be difficult, however, to define the limit to the consumption in the way proposed, as it is very probable that nearly all of the 159 workhouses might be supplied with fish, either fresh or cured. With such a range in view, we can scarcely be accused of exaggeration if we assume the practicability of the plan to 100 of the houses, and estimate their inmates at 84,000. Such a number of persons would raise the amount of the demand, if given :

Twice in the Week.			Value at 1d. per lb.	Three times in the Week.			Value at 1d. per lb.
lbs.			£	lbs.			£
In a week to	336,000	.....	1,400	In a week to	504,000	.....	2,100
„ 3 months to	4,368,000	....	18,200	„ 3 months to	6,552,000	.....	27,300
„ 6	8,736,000	.....	36,400	„ 6	13,104,000	.....	54,600
„ 12	17,472,000	}	72,800	„ 12	26,208,000	}	109,200
or 156,000 cwt.s.				or 234,000 cwt.s.			

quantities that may be appreciated, when it is shown that the quantity of cod, ling, and hake, cured in Great Britain, was under 100,000 cwt., in 1845.

The introduction into the workhouses of fish as an article of diet, could not be objected to on account of its not being a wholesome or nutritious food, as such an idea is refuted by the well-being of those of the Irish and other people who live chiefly on fish.

Fresh fish might be found to be a very desirable food in conjunction with Indian meal, from the probability of its tendency to counteract the bad effects of that kind of meal when used alone. On the score of economy, fish would certainly prove an advantageous item in the workhouse dietary. The demand so created would not only be beneficial to the fishermen, but it might lead to the inmates of the workhouses acquiring a knowledge of occupations that would be useful to them when again on their own resources, as they might be employed in making up warm clothing, preparing twine, and making nets, of all of which articles the fishermen, generally speaking, are in great want. Such supplies might be given to the fishermen in part payment for their produce, although it would be far from desirable not to pay them chiefly in cash, as that mode of payment, from the love of money being so strongly developed in the Irish character, would be more likely to rouse their energies and stimulate their exertions.

The demand for fish might be increased beyond the consumption of fresh fish, by introducing the system of curing on a more general scale than has hitherto been tried. Where the workhouses are very near to the sea, it would, we think, be both feasible and useful to appropriate a small portion of the premises, supplied with the requisite stores, to the curing of fish. The inmates of the workhouses might cure for the supply of the inland workhouses, and the fishermen, or other poor persons of the locality, might be allowed and taught to cure for themselves, either gratuitously or at the cost price of the stores.

The adoption of such a method might be the means of introducing the art of curing into several of the distressed districts of the country; of making the people better acquainted with cured fish as a useful article of food; and of creating a trade with the interior, that would prove highly beneficial to the fishermen and the people in general.

Such a system of curing might even be preferable to the present Government plan of erecting a few large establishments on distant points of the coast, and of buying fresh fish from the fishermen and curing it in the establishment. It might be a question whether the people would not be more benefited by being obliged to cure for themselves, and in a way that would leave them more at liberty perhaps to enter into a trade in salt-fish with hucksters, or any other

persons who might find it worth while to collect such an article for general traffic.

An experienced carer might visit the different localities, and instruct the people in the most approved methods of curing.

There is now in Ireland, a consumption of cured fish of British taking, which varies in value from 30,000*l.* to 80,000*l.* a year, and, therefore, the establishment of a general system of home curing appears to be warranted by the present demand, as well as called for by the many benefits to which such a plan would most probably give rise.

We would further recommend, as an assistance to poor fishermen, that a similar grant to that now distributed in Scotland of 500*l.* a year, towards the repairing of boats, should be given to Ireland. The sum is small, but, when divided into portions of a few pounds, it would restore to many a poor fisherman the means of continuing his daily labour. The proper application of such a fund could be safely intrusted to the officers of the Coast Guard, by whom the fishermen's boats are now registered.

During the late lamentable period of distress in Ireland, the formation of large companies for prosecuting the fisheries has engaged public attention, but we fear the fate of the Nymph Bank Company, and the failure to establish other similar companies, afford, to such undertakings, but faint hopes of a better result in the present day. In the business of fishing, individual exertion, of a more than ordinary nature, is so absolutely necessary, that associations of the fishermen themselves, or of a few individuals, as now exist at Dunmore, are the only kind of companies that appear likely to offer good to the fisheries, or profit to the members. The former of these kinds of partnership may be so easily promoted by the assistance and advice of local proprietors, that we cannot but look forward to the prosperity of the Irish fisheries being considerably advanced by the well-directed efforts of private individuals of intelligence and influence.

*On the Health of Nightmen, Scavengers, and Dustmen.* By WILLIAM AUGUSTUS GUY, M.B., *Cantab.*; *Professor of Forensic Medicine, King's College, London; Physician to King's College Hospital; Honorary Secretary to the Statistical Society, &c.*

I was induced to enter on the inquiry indicated by the title of this communication in consequence of an application made to me by the owner of a laystall, indicted as a nuisance, that I would examine the effect on the health of the neighbourhood of the laystall in question. The examination of the health of nightmen, scavengers, and dustmen, the results of which I now propose to lay before the Society, grew out of this local inquiry.

As in all scientific investigations, much depends upon the absence of any decided bias in the mind of the observer; it may be well to premise that a careful examination of the evidence laid before the Health of Towns' Commission in reference to the health of nightmen

and of men working in the sewers of London, had left me in a state of uncertainty as to the real effect of this class of occupations upon health—a state not unfavourable to discovery of truth\*. In reference to the several subjects of the inquiry, it may also be desirable to state, that they were in no way prepared for the questions put to them, either by previous notice of my intended visit, or by any preliminary observations calculated to affect their answers to my queries. The mode of procedure was as nearly as possible the same in all cases, and such as I deemed most likely to elicit the real truth.

With a view of collecting the facts relating directly to the health of the men employed, in one way or other, in laystalls, whether as nightmen, scavengers, dungmen, dustmen, or hillmen, I visited and inspected eleven laystalls, being nearly one-half of the number existing in the metropolis. For the facts relating to the health of bricklayers' labourers, I am indebted to Mr. Baker, who gave me facilities for personally inspecting the men employed on the works of the British Museum, and for those bearing on the health of brickmakers, to Mr. Dodd, the well-known dust contractor.

My first inquiries were directed to the health of the men employed in the laystalls; and as it was necessary to compare them with some standard, I selected the bricklayers' labourers as most likely to answer that purpose. When, however, I came to examine the latter class of men, I found that they differed from the object of my inquiry in a point which seemed by no means unimportant—the large majority are Irish, while an equal proportion of the men who work in laystalls are English. It was this circumstance which induced me to visit the brickfields, as I was given to understand that I should there meet with a class of men consisting, with very rare exceptions, of Englishmen, and, for that reason, furnishing a more just standard of comparison; my object being to contrast two classes of men resembling each other in the common circumstance of working in the open air, and as much as possible in all other points, but differing in being or not being exposed to offensive exhalations.

It is not necessary that I should enter into any description of the occupations of the bricklayers' labourer or of the brickmaker; but as the employments of which the laystall are the scene are less familiar, it may be desirable to enter into a brief description of them. In most of the laystalls or dustmen's yards, every species of refuse matter is collected and deposited:—nightsoil, the decomposing refuse of markets, the sweepings of narrow streets and courts, the sour-smelling grains from breweries, the surface soil of the leading thoroughfares, and the ashes from the houses. The proportion in which these several matters are collected, varies with the engagements of the contractors. In some laystalls, for instance, little or no nightsoil is deposited, while in others, this material is collected in large quantity. In all these establishments the bulk of the deposits consists of dust from the houses, which is sifted on the spot by women and boys seated on the

\* See "Ranking's Half-yearly Abstract of the Medical Sciences," vol. IV., p. 417, where, in reference to the men working in the sewers, I express the opinion that we are bound to suspend our judgment "till a more extended inquiry, and an accurate comparison with some healthy standard of out-door occupation shall have been instituted."

dust-heaps, assisted by men who are engaged in filling the sieves, sorting the heterogeneous materials, or removing and carting them away. All the persons so occupied are, of course, exposed to the exhalations which rise from the several deposited matters; but more directly and immediately to those with which their own special occupation brings them into contact. It would not answer any good purpose to enter into a minute classification of the several persons submitted to inspection and inquiry, especially as many of them have followed at different times different branches of the trade; but as I have noted down the employment chiefly followed by each man, I shall be able to make such distinctions as may seem called for.

The points ascertained by inspection and inquiry, were the same in the case of each class of working men, and the questions put to them were shaped as nearly as possible in the same way. The results were noted down on the spot in a tabular form, comprising for each individual the initials, age, age at the time he began to work, the diseases, if any, to which he was subject, the particulars of absence from work, with the assigned cause and duration of the absence or absences, and the previous occurrence of fever. In reference to the latter point especially, if the answer to the question—Have you ever had an attack of fever? was in the affirmative, the duration of the illness, and such other particulars as could be obtained, were noted down, and the disease was not entered as fever until I had satisfied myself that in all probability it had been rightly named. To the results of these inquiries, I added in a separate column, the letter G or B indicating good or bad health, as shown by the appearance, still further distinguishing the first class by the figures 1, 2, 3, indicative of the degrees of good health, the figure 3 standing for robust health, and 1 and 2 for lower degrees of strength and vigour. As might be expected, very few in any of the employments were in bad health, but there was a marked difference in the proportion of the robust to those whose health seemed less vigorous. With a view of avoiding circumlocution, I shall designate the men employed in laystalls by the one word *Scavengers*, and shall at once present the results of my inquiry under that title in a condensed tabular form.

	Scavengers.	Bricklayers' Labourers.	Brickmakers.
Number examined.....	96	73	28
Greatest age of any man at work.....	66	64	68
Number above 20 years of age.....	75	71	26
Average age of all above 20.....	37·62	38·77	38·77
"    "    30.....	44·66	41·75	43·42
State of health.—Robust.....	78	59	19
Ditto per cent.....	81·	81·	68·
"    Good.....	12	12	4
Ditto per cent.....	12·5	16·5	14·
"    Delicate.....	6	....	3
Ditto per cent.....	6·	....	11·
"    Bad.....	....	2	2
Ditto per cent.....	....	3·	7·

	Scavengers.	Bricklayers' Labourers.	Brickmakers.
Number attacked by fever .....	8	26	6
Ditto per cent. ....	8·	35·5	21·5
Number of attacks of fever .....	9	28	6
Ditto per cent. ....	9·	38·	21·5
Subject to Gout .....	4	....	....
„ Rheumatism .....	3	3	6
„ Colds .....	3	2	2
„ Winter cough .....	....	6	....
„ Cough .....	3	1	....
„ Asthma .....	1	2	....
„ Spitting of blood .....	....	1	....
„ Vomiting of blood .....	1	....	....
„ Indigestion .....	1	1	....
„ Headaches .....	1	....	....
„ Pain in the side .....	....	1	2
„ Fits .....	1	1	....
Total subject to illness .....	18	18	10
Ditto per cent. ....	19·	25·	36·
Never kept from work one day by illness....	51	26	5
Ditto per cent. ....	53·	36·	18·
Never kept from work one week by illness	16	5	4
Ditto per cent. ....	18·	7·	14·
<i>Severe Attacks of Illness.</i>			
Inflammation of liver .....	1	....	....
Rhenmatic fever .....	4	2	3
Brain fever, (delirium tremens.) .....	2	....	1
Inflammation of lungs .....	1	3	4
Influenza .....	1	2	1
Vomiting of blood.....	1	....	....
Small pox .....	....	1	....
Ague .....	....	....	2
Spitting of blood .....	....	....	1
Bowel complaint .....	....	....	1
Total .....	10	8	13
Ditto per cent. ....	10·5	11·	46·

An examination of this table, which has been carefully compiled from the notes taken on the spot, must convince the most sceptical, that the health of scavengers is fully equal to that of the labouring men with whom they are compared. The average and greatest ages of men actually at work, the state of health as determined by inspection, the proportionate numbers subject to illness, or having suffered from severe attacks of disease, and the numbers altogether exempt from sickness, or kept from work only by short attacks of indisposition—when taken together supply a strong argument in favour of the healthiness of the scavenger's occupation.

But the most remarkable result of the comparison is displayed in the relative liability of the three classes to fever. Sir Anthony

Carlisle\* notices the slight liability to fever of the men employed in cleansing the sewers; and the numbers in the foregoing table would certainly tend to confirm his statement, by the analogy of a class following an allied occupation. It will be seen, that the number of men attacked by fever among the scavengers is 8 per cent., among bricklayers' labourers 35½ per cent., and among brickmakers 21½ per cent.; while the attacks of fever in the three classes are 9, 38, and 21½ per cent. respectively. In other words, the bricklayers' labourer is more than four times, and the brickmaker nearly three times as liable to fever as the scavenger.

On referring to the column of my notes in which the occupation chiefly followed by each individual is set down, I find, that of 34 men entered as nightmen, only 1 had had an attack of fever: after being out of work three weeks†. The remainder occurred in men following other branches of the business. One of these (now a master scavenger) had had two attacks of fever which he attributed to his business; a second (a hillman‡), stated that he was taken ill with fever after cleansing an

\* "Practical Observations on the Preservation of Health and the Prevention of Diseases," 1838, p. 19. Sir Anthony states that out of between forty and fifty men employed in the Sewers, only three had had fever. Patissier ("Traité des Maladies des Artisans"), however, describes the greater part of the men employed in the sewers of Paris as cachectic, as having a blanched and livid appearance, and as scarcely attaining the age of forty or fifty years. He ascribes their unhealthy appearance to their poverty and low living. The men employed in the sewers of London, on the contrary, are, according to Sir Anthony Carlisle, who is fully borne out by the facts collected at his request by Mr. John Houseman, Clerk to the late Westminster Commission of Sewers, (see Mr. Hertslet's Evidence before the Health of Towns' Commission,) by no means an unhealthy race of men. See also, in confirmation of this opinion, the statement of Mr. P'Anson. These facts and opinions will be found more minutely detailed in "Ranking's Half-yearly Abstract of the Medical Sciences, vol. IV., p. 420.

† It is remarkable that Ramazzini, in his chapter on the diseases of men following this occupation, makes no mention of any complaint to which they are subject except inflammation of the eyes: and this is the more worthy of observation as he himself tells us that the first idea of his work was suggested by pity for this very class of labourers. Patissier, after noticing this complaint of the eyes, under the designation *Mitte*, enters into considerable detail on the asphyxia of nightmen, known in Paris as the *Plomb*; but he does not enter into any details respecting their general state of health, or point out any other maladies to which they are subject. The same author bears testimony to the general good state of health of the manufacturers of *urate* and *pondrette*, who are exposed to the same exhalations as nightmen. Thackrah ("The effects of Arts, Trades, and Professions, &c., on Health and Longevity," 2nd edit., p. 62.) states that "The nightmen of London are generally healthy, notwithstanding their disgusting occupation. Of 18, examined by my assistant, only two had even slight disorder. Appetite, they declare, is increased by the effluvia. Their only complaint is defect of food from lowness of wages." Much to the same effect is the evidence of Mr. James Creevy, nightman, of Drury Lane, who, out of nine men in his employ, had one of 60 and another of 66 years of age; and of Mr. Thorn, who knew one man at work at 67 and who describes them as a healthy and robust set of men.

A fact mentioned to me, by Mr. Stevens, who did me the favour of accompanying me in my inspection of the scavengers' premises, is too curious to be omitted. He stated that he perfectly well recollects, thirty years ago, when he was a lad, seeing as many as twelve patients, directed by the faculty of that day to walk round the shoots for night-soil on his father's premises; and he appealed for confirmation of this statement to his brother, who said that he had seen scores of patients industriously inhaling this very curious dose of physic.

‡ Employed in sifting the ashes.

alley in White Cross Street; a third (also a hillman), had suffered from fever, but could not trace it to any distinct cause; a fourth (a dustman), had an attack of fever before he entered his business; a fifth (a hillman), had an attack of fever twenty years ago, when working at a willow manufactory, and he stated that it ran through the workshop; a sixth (a dustman) had fever a year ago while working, for a time, at a coal wharf; and the seventh was attacked while working at his usual employment of a dustman.

It would appear, then, that out of eight persons attacked with fever four only were at the time actually working at their usual employment, while of the remainder, only two attributed the disease to the occupation itself. The number of men attacked by fever among the class designated generally as scavengers might, therefore, have been fairly reduced one-half, but as I was unwilling to exercise too rigorous an exclusion, I have contented myself with pointing out the true state of the facts.

The excess in the number of fever-cases occurring among the bricklayers' labourers, is a very remarkable fact. I had examined 16 of the men before it occurred to me to inquire whether they had been attacked in England or in Ireland; but in the case of the remainder I took care to ascertain this point. The result of the inquiry was, that 12 out of the 57 had been attacked in Ireland, 1 in France, and 9 in England. These 9 cases of fever, out of a total of 57. (or nearly 16 per cent.,) must, therefore, have occurred while the men were following their particular occupation. Whether the occupation itself is in any way to blame, is a question that must be reserved for examination presently.

If we take, as our test, the number of cases of fever occurring among the three classes submitted to examination, it would seem to follow that the scavengers of London are a peculiarly healthy race of men. How far this conclusion is borne out by the application of other tests, I now proceed to inquire.

The *greatest age* of any man at work among the 96 scavengers examined, was 66, the oldest bricklayers' labourer, was 64, and the oldest brickmaker 68. Men were reported to me by name who had passed their 70th year and were still at work in the laystalls, and one Richard Tyrrell, of the Parish of Shadwell, was stated to have reached the age of 97, after having worked all his lifetime at the trade. In corroboration of this statement, which was confirmed by a score of master scavengers, it was mentioned that when, in the course of last year, a deputation of the leading contractors waited upon Lord Morpeth, a petition for pecuniary assistance to bury this man was shown to his lordship. Another man, who was familiarly known as Old Wood, was said to have completed a century. I have already stated incidentally, that out of nine nightmen employed by Mr. Creevy, one was 66 years of age, and that Mr. Thorn refers to one who was at work at 67. Measured, therefore, by the test of age, the occupation of the scavenger would not appear to be very unhealthy.

The *average age* attained by all above 20 in the three classes of occupation does not materially differ; the scavengers, however, are about a year younger than the two other classes. This circumstance is easily explained by the fact, that many of the men working in the

scavengers' yards begin at a very early age as sifters, while the bricklayers' labourer is not fit for any branch of his employment till a later period; and this remark applies, to a more limited extent, to the brickmaker. That this is the true explanation, is rendered highly probable, by the average age of all who are employed in the three trades above 30 years of age. The mean age of the bricklayers' labourer, reckoning from this point, is found to be 41·75, of the brickmaker 43·42, and of the scavenger 44·66. In confirmation of these results, it may be mentioned, that the average age of the 45 sewermen examined by Mr. Houseman, was 39 years and 2 months, and that of the men reported upon by Mr. P'Anson, 45 years. It may afford a standard of comparison, to give the average age of pressmen and compositors, as ascertained by myself. Of 45 pressmen it was 34 years, and of 197 compositors 28 years.

The per centage proportion of men among the scavengers found in the enjoyment of *robust health*, is the same as among the bricklayers' labourers, but greater than among the brickmakers, the numbers being respectively, 81, 81, and 68. But on the whole, I have no hesitation in stating, that the scavengers are the healthiest looking body of men.

The per centage proportion reporting themselves as *subject to sickness* of one kind or another in the three employments, are:—Scavengers 19, bricklayers' labourers 25, and brickmakers 36. So that in this respect the scavengers have a marked advantage.

The per centage proportions stating that they had suffered some *severe attacks of illness*, other than fever, were as follows:—Scavengers 10½, bricklayers' labourers 11, and brickmakers 46.

The per centage proportion *attacked by fever*, it may be well to repeat, were:—8, 35½, and 21½, for scavengers, bricklayers' labourers, and brickmakers respectively. Among nightmen it was 3 per cent. Of the 45 men working in the sewers, two, according to Mr. Houseman, had suffered attacks of fever, one of which was traced to the occupation. This would give about 4 per cent.

The per centage proportion of scavengers who had *never been kept away from their work by illness for a single day*, was 53, of bricklayers' labourers 36, and of brickmakers 18; being a result highly favourable to the scavengers.

The per centage proportions *never kept away from work a week by illness*, were for the three classes as follows:—Scavengers, 18 per cent., bricklayers' labourers 7 per cent., brickmakers 14 per cent.; a result also favourable to the first-named class.

The following are individual instances of the enjoyment of uninterrupted health for a considerable term of years among the class of scavengers:—R. S., æt. 55, began to work at 15; W. L., æt. 56, began to work at 36, having previously served in the army; I. G., æt. 59, began to work at 8 years of age; J. W., æt. 62, began to work at 40, previously a labourer; J. C., æt. 66, began to work at 10 years of age.

The women and children employed in sifting the cinders are no exception to the rule of good health enjoyed by the men. They are, with very few exceptions, a healthy looking, ruddy complexioned class. One or two of the boys whom I saw at work, would have been excellent models for the artist.

I would once more advert to the remarkable contrast offered by the three classes submitted to comparison in regard to their liability to fever. On the general question of the true cause of fever, there is, as is well known, a difference of opinion among medical men. There are those who believe that fever is chiefly or solely due to emanations from putrefying animal and vegetable matter, and they carry their belief so far as to condemn on this ground, all collections of such matters even on open spaces in the centre of our towns. On the other hand, there are many esteemed authorities who affirm that putrefying animal and vegetable matter is never the true cause of fever\*. It is probable that the truth will hereafter be found to lie between these two extremes. My own recent inquiries, and especially the facts detailed in this communication, certainly tend to confirm an opinion which I have more than once expressed, that filth is rather the *nurse* than the *parent* of fever, to which I would now add the expression of my opinion that, in extreme case, fever may be bred of filth. These extreme cases are to be found, as I believe, not in the neighbourhood of dust-heaps, and accumulations of animal or vegetable matter in the open air†, but in houses inverted over cesspools, or otherwise made the receivers of all the foul evacuations from ill constructed drains; or in houses crowded to excess with dirty and squalid occupants‡. Even in

\* It will add to the interest and value of this communication if I append the opinions upon this point of one or two esteemed authorities. Dr. Watson ("Lectures on the Principles and Practice of Physic,") is strongly of the opinion stated in the text, for he distinctly affirms "that neither animal nor vegetable decomposition is sufficient to generate fever of any kind (vol. I. p. 719, 1st edition);" and this is not a casually expressed opinion, but the spirit of all that he says on this difficult subject. Dr. Christison, again, ("Library of Medicine, vol. I., page 162,") says: "Since continued fever clearly originates often in propagation from the sick to the healthy, it becomes a second question of much interest, whether it originates in any other cause. Authors and practitioners seem in general to be very easily satisfied upon this head, and to have decided the matter in the affirmative; nay, some talk with the utmost familiarity of various special causes, such as cold, fatigue, mental emotions, putrid effluvia, excesses of the table, and the like. But the question of the origin of continued fever and their causes is far from being easily settled to the satisfaction of a philosophical mind." Dunglison ("Elements of Hygiene," p. 91), speaking of "emanations from animal and vegetable substances in a state of decomposition," gives it as his opinion "that the admixture of such emanations with the air does not affect public salubrity to such an extent as might be imagined." Much to the same effect is the opinion of Thrackrah, (op. cit. pp. 63 and 193,) and of an author of deserved repute in his own time (Sir Gilbert Blane, Medical Logic, p. 162), who, after stating that he agrees with Dr. Bancroft in thinking "that febrile miasmata do not in any case consist in the exhalations of simple putrefaction," admits that fever may be produced by the "sordes of the skin and tainted effluvia of the living human body," and especially mentions the exhalations from the holds of ships. The foregoing quotations are given as contributions to the statistics of opinion.

† Patissier attributes the little inconvenience suffered by persons exposed to offensive effluvia to the circumstance of those effluvia being greatly diluted by the atmosphere. In this opinion I fully concur.

‡ In two cases of fever which I have recently attended, the patients lived in a decent, well-paved court, in houses thus inverted over cesspools, and cheated into a false security by badly constructed drains. A few years since fever ran through a family of five persons in a large house in one of the open squares of London. It could not be traced from without, nor did it spread to any of the attendants. It proved fatal to two out of the five. That house, too, was undrained, and constituted a receiver of offensive gases from cesspools in the basement. A case given in evidence

these extreme cases, however, but especially where they occur in the midst of crowded populations, there is great difficulty in forming a sound opinion, as in the midst of such populations, the seeds of all sorts of contagious diseases are likely to be very generally diffused, and ready at any moment to germinate into this destructive malady.

I am disposed to attribute the great liability of the bricklayer's labourer to fever, to the habit of over-crowding so common among the Irish, and I think it not unlikely, that the somewhat lower liability to fever to the brickmaker, may be also due to his mode of living. In comparing different occupations, so many things have to be considered both in the occupations themselves and in the habits of the men, that it is very difficult to arrive at a just conclusion. To attain to perfect satisfaction in this matter, it would be necessary to extend the inquiry to several other classes of men working out of doors; as well as to strengthen the probabilities established in this paper by a reference to the employments of the victims of fever. The registration of occupations, however, is at present so imperfect that there is little hope of being able to collect a sufficient number of facts. In the meantime, the present contribution is offered as a collection of probabilities bearing on the health of a very useful body of men, and as probabilities, far more valuable than mere hypotheses unsupported by fact, or generalizations pushed to an extreme, attended, as they are, with the obvious inconvenience of diverting the attention of the advocates of sanitary improvement from the condition of our houses to that of laystalls, markets, and graveyards, which, though not free from objection, are comparatively harmless, and require rather strict supervision, than summary suppression.

I cannot conclude this communication without adverting for a moment to the case which gave rise to this inquiry. It was an indictment for a nuisance, in which two questions had to be decided by the jury:—1. Was the dust-yard a source of inconvenience and discomfort to the inhabitants of the neighbourhood? and 2. Was it injurious to health? The verdict against the defendant may have turned entirely on the answers to the first of these questions. As to the second, the absence of deaths from fever in the streets and courts immediately surrounding the alleged nuisance, as proved by a reference to the books of the Registrar-General; the very trivial complaints of illness, and the very small number of cases of sickness found to exist on two several

before the Health Commission by Mr. Thorn, as the only one which he had been able to trace to a collection of filth, occurred in the person of a young man direct from the country, who was put to sleep in a kitchen under the windows of which horse-dung had been heaped up. The interesting case reported by Dr. Christison, in the Seventh Vol. of the "*Monthly Journal of Medical Science*," was of this class. The drains of the farm-house in which typhus fever had broken out, were found "all closed up and obstructed with the accumulated filth proceeding from the necessaries and farm-yard," and "a part of the accumulation" of farm-yard stuff "had been heaped up very near the back wall of the house." The large number of fever cases occurring in Church Lane, St. Giles's—a place completely isolated from the influence of laystalls or crowded graveyards, and from all external sources of impurity, except that due to the neglected state and bad habits of its inhabitants, is a striking example of over-crowding and personal uncleanness. The neighbourhood of Hatfield Street is fortunate in possessing privies for cesspools, and in a more moderate degree of over-crowding, and the inhabitants were found, in a corresponding degree, free from fever.

examinations of the neighbourhood, served to convince me that, if the disagreeable odours complained of by the neighbours, had any effect upon their health, it was in a degree which no test of sickness or mortality that I could apply, would have served to render evident. If this conclusion be well founded, it may not be deemed unimportant, when it is considered, that the thorough cleansing of so large a city as the metropolis, presupposes both a large staff of men, and convenient places of deposit at points not too remote from the districts requiring to be cleansed. A proper supervision of the laystalls and dust-yards of the metropolis would easily prevent them from becoming nuisances to the immediate neighbourhoods, and even advantageous to the health by preserving open spaces, which would otherwise be crowded with buildings. The complete street and house drainage of the metropolis would put a stop to the deposit of the more offensive matters; and the dust from the houses, and the sweepings of the streets might be deposited with perfect safety wherever it is found most desirable. The banks of the river, and of the several canals, are the spots pointed out by common sense as the best and most convenient for the purpose.

### MISCELLANEOUS.

#### STATE OF THE PUBLIC HEALTH IN THE THIRD QUARTER OF THE YEAR 1847.

"THE Quarterly Returns are obtained from 117 Districts, sub-divided into 582 Sub-Districts. *Thirty-six* Districts are in the Metropolis, and the remaining 81 comprise, with some agricultural Districts, the principal towns and cities of England. The population was 6,612,800 in 1841."

The deaths registered in this quarter were 49,479; a number less by one thousand nine hundred and forty-eight than were registered in the corresponding quarter of 1846; but 7,007 more than the corrected average of the September quarters of 1838-46. Upon the whole there is a slight improvement in the health of the country.

The relative salubrity of the summer season of the ten years, 1838-47, is displayed in the subjoined table.

	1838	1839	1840	1841	1842	1843	1844	1845	1846	1847
Deaths Registered in the Sept. quarters of 10 years .....	34,752	37,317	39,498	36,058	39,409	36,933	38,933	36,139	51,427	49,479
Deaths which would have been registered if the mortality had been uniform, and the numbers had increased from 1838 at the rate of 1.75 per cent. annually. Deduced from the average of 1838-46.	36,332	36,968	37,615	38,273	38,943	39,625	40,318	41,023	41,741	42,472
UNHEALTHY SEASONS Difference above the calculated number..	..	349	1,883	..	466	..	..	..	9,686	7,007
HEALTHY SEASONS. Difference below the calculated number..	1,580	..	..	2,215	..	2,672	1,385	4,884	..	..

From the next table of the deaths returned in each quarter since 1838, it will be seen that a small rise in the mortality took place in the spring after the mild winter of 1846—that a sudden advance occurred in summer—that the mortality reached the maximum (56,105) in the winter of 1847, and has since slowly subsided.

In London there has been no sign of improvement. 10,987, 12,601, and 13,187 deaths were registered in the September quarters of 1845, 1846, and 1847. The deaths in the summer quarters of the three years from small pox were 76, 51, and 320; measles, 688, 78, and 521; scarlatina, 194, 208, and 316; diarrhoea, 449, 1,549, and 1,196; cholera, 26, 197, and 98; dysentery, 43, 75, and 143; remittent fever, 8, 12, 23; typhus, 273, 403, and 895; erysipelas, 56, 92, and 126; the zymotic class of diseases generally, 2,409, 3,234, and 4,061. The deaths from diseases of the respiratory organs were nearly stationary; 1,558, 1,784, and 1,581 persons died of consumption; 1,111, 977, and 1,071 persons of inflammatory and other diseases of the lungs. Two three, and sixteen deaths were directly ascribed to various kinds of privation in the three last September quarters. The increase in the deaths by external violence, which were 342, 403, 425, may have arisen from erysipelas, and other affections supervening on accidents, in an unusual proportion.

In the first nine weeks of the quarter the mean temperature of the atmosphere, and of the waters of the Thames was above 60°; the mortality in London from diarrhoea, dysentery, and cholera, rose from 17 on the first to 188 on the seventh week of the quarter, and gradually fell to 107 on the last week. Typhus raged with unusual virulence. The weekly deaths were never below 50, and in the third week of September 111 persons died of this disease. The weekly average was 30 for the same quarter of five preceding years.

The epidemic of fever has been more fatal in Lancashire than in London. In Manchester, Salford, and Chorlton, 4,154 deaths were registered from all causes. Diarrhoea and fever were the prevalent diseases. Typhus carries off men and women in the prime of life. Diarrhoea destroys more children, and becomes dangerous to adults in the form of cholera. The Registrar of Deansgate, Manchester, says:

“More children have died in the district during the last quarter under the age of 5 years, than in most other quarters there have been deaths at all ages. This is an astounding fact, yet perfectly consistent with prior observation; if the general mortality be large, the infant mortality will ever be found to bear its due proportion, and the causes, in such a district as this, are perfectly obvious. In the calamitous season just passed, manufactures have been almost at a stand still; food has been unattainable by the poor, for employment they had none; Famine made her dwelling in their homes, and their attendant horror, Typhus, relentlessly swept his victims to the grave. During the sickness, which either terminated in death, or rendered the removal of the poor to the fever hospitals necessary, their offspring have been neglected and uncared for; some have sunk under the malady of their parents—others, deprived of the nourishment nature had supplied, have pined and wasted away, the victims of inanition, their glands diseased, and incapable of assimilating the incongruous food supplied to them. The disease of autumn had also done its work fearfully amongst them, no less than 103 deaths, almost entirely of children, being recorded from diarrhoea, under the drain of which the exhausted frames of the little sufferers rapidly sunk. In the close, ill-ventilated, and densely-crowded rooms where the poor hive together, contagious disorders make rapid progress, extending from one to another, and acquiring increased virulence from the filth and noisomeness with which they are nourished.”

Liverpool, created in haste by commerce—by men too intent on immediate gain; reared without any very tender regard for flesh or blood; and flourishing, while her working population was rotting in cellars—has been severely taught the lesson, that a part of the population, whether in cellars or on distant shores, cannot suffer without involving the whole community in calamity. In itself one of the unhealthiest towns of the kingdom, Liverpool has for a year been the hospital and cemetery of Ireland. The deaths registered in the four quarters of 1846 were 1,934, 2,098, 2,946, and 2,735; in the three quarters of 1847 ending in September last, 3,068, 4,809, and 5,669! The population of Liverpool was 223,054 at the last

census. It is impossible to represent more correctly than is done by the short notes of the Registrars, the piteous spectacle which this great town presented—with the floating Lazarettos on the Mersey—the workhouses crowded with destitute paupers—the three large “sheds which will hold 300 persons, nearly full of patients at the present time”—and the fever “getting more prevalent among the upper classes.”

*Sub-District.—Saint Martin.*

“Deaths 1,026: this return shows a fearful increase of mortality in this district. Fever, diarrhoea, and dysentery, as in the last quarter, have been the prevailing diseases, but to a far greater extent. In the corresponding quarter last year, there were 700 deaths, which was the greatest number ever registered by me, but the present return shows an increase on that quarter of 326. The deaths from fever are 291, diarrhoea 174, dysentery 82.”

*Great Howard Street.*

“Deaths 1,253: this return shows an increase of 183 over the last quarter. It may be accounted for by the fact, that the floating fever hospitals have been given up by the select vestry, and consequently more patients are sent to the north fever shed. The fever is now getting more prevalent in the upper classes of the town, though not of that fatal character that has destroyed so many indigent Irish. Diarrhoea and dysentery still prevail.”

*Dale Street.*

“Deaths 747: being 57 less than in the preceding quarter. This may be accounted for in great measure by the removal of the lower Irish from the cellars, besides many being sent back to Ireland by the authorities; otherwise, the mortality would have been greater than in the preceding quarter. Fever cases 250; diarrhoea 111; dysentery 20; small pox 16; measles 11; cholera 6.”

*Saint Thomas.*

“Deaths 915: which include 301 who died on board the Lazarettos, on the river Mersey. Typhus and dysentery have been the prevailing diseases. The former is very much on the decrease, and the district has begun to assume a more healthy state.”

*Mount Pleasant.*

“Deaths 956: including 630 in the workhouse, and 33 at the infirmary. There is attached to the workhouse a large fever hospital, which will hold about 128 persons; and there has also been very recently erected (for the reception of the Irish paupers) three large buildings or sheds, which will hold about 300 persons; also other buildings, all of which are nearly full of patients at the present time. The deaths this quarter are 51 less than in the last quarter. There were 324 fatal cases of fever; 18 of dysentery; 73 of diarrhoea; and 22 of phthisis in the workhouses. There have also been 51 fatal cases of fever in this district, independently of those in the above public institutions.”

*Islington.*

“Deaths 524: the largest quarterly number I have ever registered, principally to be attributed to fever, diarrhoea, and dysentery; from fever in July, 38; August, 42; September, 25;—105. Diarrhoea, 78; dysentery, 37.”

It will require all the energy of the inhabitants of Liverpool, and the utmost resources of science, to place the health of the town in a satisfactory condition.

The mortality remains high in Birmingham, Dudley, Wolverhampton, Shrewsbury, in many of the towns of Lancashire, in Leeds, Hull, York, and Sunderland. The returns from the other towns of the kingdom present nothing unusual, the mortality being much the same as in previous years. This refers to the relative mortality. The absolute mortality is always higher by from 10 to 50 per cent. in towns, than in open country districts. This is illustrated by a comparison of the deaths registered in London during the last 13 weeks, and of the deaths which would have happened if the rate of mortality had been the same as in Dorsetshire, one of the agricultural counties, in which the wages are low, and in which the condition of the labourer is far from what it is desirable that it should be.

	0—15	15—35	35—55	55 and upwards.	All ages.
Deaths registered in London in 13 weeks ending September 25 .....	6,584	1,786	1,983	2,834	13,187
Deaths which would have happened if the mortality had been at the same rate as in Dorsetshire in the September quarters 1838—41 .....	3,078	1,709	1,367	1,945	8,109
Excess of deaths in London during the 13 weeks .....	3,506	77	616	879	5,078

3,506 children under 15 years of age were destroyed in London, in addition to 3,078 carried off by causes which may be supposed to be the same as those fatal in the country. The mortality is equal at the age 15-35, when London receives healthy recruits from the various counties. At the age of 35 the mortality is 45 per cent. higher in London than in Dorsetshire. If the chance that a man above 35 will die in the country during the summer quarter be represented by 2, the chance that he will die in London is nearly 3. It may be admitted that part of the London population is poisoned by alcohol, and that in their houses and persons they are dirtier than the country people; still the great excess of mortality, and in part, perhaps, the intemperance and impurity must be ascribed to the crowding, the want of water, decaying animal and vegetable matters unremoved, and the inefficiency of the sewers, which neither carry off the solid, liquid, or gaseous matters poured into or generated within them every day. If the chance of dying is increased from 2 in the country to 3 in London, the liability to suffer from epidemics is raised still more.

All the diseases of the zymotic class—such as small pox, measles, scarlatina, typhus, influenza, and cholera—have the remarkable quality of becoming epidemic. After certain intervals of time, in which they are fatal to a smaller or greater number of persons in different places and seasons, great multitudes are suddenly attacked or destroyed in a given locality; the disease in this intense form involves the neighbouring population, spreads around the whole region, and sometimes travels over the tracks of human intercourse through the world. Little is known of the immediate chemical or vital causes of epidemics; but in given circumstances, where many are immersed in an atmosphere of decaying organic matter, some zymotic disease is invariably produced; where there is starvation it is most frequently typhus; cold, influenza; heat, it is cholera, yellow fever, plague. At the mouths of the Ganges, of the Nile, of the Niger; in London, particularly up to the 17th century; in camps, in barracks, in ships, in prisons formerly; in Ireland, in Liverpool, in all our towns now, the circumstances in which zymotic diseases become epidemic may be witnessed.

A city breathing an atmosphere perfectly pure may not be exempt from every epidemic; but observation has shown that such irruptions are unfrequent, and fatal to few persons of strength or stamina. Internal sanitary arrangements, and not quarantine or sanatory lines, are the safeguards of nations. A salubrious city in an epidemic, like a city built of stone in a conflagration, is exposed to danger and injury, but not to the same extent as the present cities of Europe, which are left without any adequate regulations for the health and security of their inhabitants.

The great historical epidemics have diminished in intensity; and there appears to be no reason why they should not be ultimately suppressed, with the advances of the population among which they take their rise. Their origin is obscure, but influenza appears generally to become first epidemic in Russia, cholera in India\*. It is in India that the source of the latter disease must be attacked. If the health of India become sound, Europe might be safe, and hear no more of the epidemic which is now traversing Russia. The attention of the Indian authorities has for some time been directed to the subject. The Marquis of Wellesley in 1821

\* In Italy, influenza is called the *catarro russo*; in Germany, the *russische krankheit*.

effected improvements in Bengal. Mr. Martin, one of the Commissioners appointed by the late Government, to inquire into the Health of Towns, addressed Lord Metcalfe, the Governor-General, on the sanitary improvement of Calcutta in 1835; his comprehensive plans were promoted by that eminent statesman. Lord Auckland appointed a sanitary commission, of which Sir John Grant was the chairman; and thus procured a very able official report on the health of Calcutta, before the subject was touched at home\*.

The other nations of Europe are beginning to take an interest in public sanitary improvements; and any plans found to succeed in England, will no doubt be carried out as speedily as possible in all parts of Her Majesty's dominions; for the vast population that owns Her sway is intimately united. Asiatic cholera has taught us that the lives of thousands in England may depend on the condition of the Pariahs of Jessore†.

\* See "Lancet," Sept. 25, and Oct. 9, 1847.

† The epidemic cholera, which reached England in 1831, broke out at Jessore, near Calcutta, in 1817, and destroyed 10,000 persons.

*Deaths in London from all Causes (exclusive of Violent and Sudden Deaths), and from Diarrhœa, Dysentery, and Cholera, in the 13 Weeks of the Summer Quarters 1845, 1846, and 1847.*

Number of Weeks.....	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	Total.
Deaths from all causes, exclusive of Violent and Sudden Deaths.	1845 757	756	829	858	810	852	834	821	796	742	804	739	811	10,409
	1846 894	882	1,026	976	1,063	1,100	925	870	875	850	880	819	783	11,943
	1847 835	857	921	871	926	940	1,070	1,043	1,054	1,002	998	1,109	1,010	12,636
Deaths from Diarrhœa, Dysentery, and Cholera ....	1845 15	30	30	50	41	50	48	42	38	33	46	38	52	518
	1846 76	93	149	187	218	238	180	169	148	126	87	83	62	1,321
	1847 17	38	47	67	125	128	188	172	157	135	139	117	107	1,437
Mean Temperature	1845 61·3	60·9	59·6	60·0	56·3	59·5	55·6	56·5	57·6	54·6	55·8	55·0	50·0	57·1
	1846 65·0	60·0	64·9	62·6	70·6	66·5	61·8	60·8	62·6	61·6	64·5	60·3	59·2	63·1
	1847 61·3	65·5	70·2	63·1	65·9	62·6	63·2	64·1	60·3	54·3	56·3	54·1	56·1	61·3

*Deaths Registered in the Four Quarters of the Eight Years 1839—1846, and Three Quarters of 1847, in 117 of the Districts of England and Wales.*

Quarters ending	1839	1840	1841	1842	1843	1844	1845	1846	1847
March .....	42,410	46,376	46,967	44,903	43,748	46,136	49,949	43,850	56,105
June .....	41,244	42,074	39,133	38,569	40,343	38,977	40,847	43,734	51,385
September ..	37,317½	39,498	36,958	39,409	36,953	38,933	36,139	51,427	49,479
December ..	41,740	44,186	39,292	39,662	42,607	41,081	39,321	53,093	..
Total ....	162,711	172,134	161,450	162,543	163,651	168,127	166,256	192,104	..

The mortality of the district of Lewisham, and sub-district of Hampstead, is included in this Table throughout.

## MORTALITY OF THE COUNTRY.

*Quarterly Table of the Mortality in 117 of the Districts of England (including the Principal Towns), showing the Number of Deaths Registered in the Quarters ending September of the Four Years 1844-45-46-47.*

Parts of Divisions and Districts.	Popula- tion 1841.	Deaths Registered in the Quarters ending Sept. 30th.				Parts of Divisions and Districts.	Popula- tion 1841.	Deaths Registered in the Quarters ending Sept. 30th.			
		Years.						Years.			
		1844.	1845.	1846.	1847.			1844.	1845.	1846.	1847.
<i>Metropolis*.</i>						<i>North Midland Division.</i>					
West Districts...	301,326	1,822	1,559	1,815	1,936	Leicester .....	50,932	339	458	536	343
North Districts...	376,396	2,342	1,872	2,452	2,543	Lincoln .....	36,110	143	154	246	209
Central Districts	374,759	2,190	2,075	2,201	2,452	Nottingham....	53,080	394	285	469	442
East Districts ..	393,247	2,547	2,637	2,859	2,948	Basford .....	59,634	233	262	370	311
South Districts..	502,483	3,075	2,844	3,274	3,308	Derby .....	35,015	199	181	281	299
Total†.....	1,948,211	11,976	10,987	12,601	13,187	Total .....	234,771	1,299	1,340	1,902	1,604
<i>South Eastern Division.</i>						<i>North Western Division.</i>					
Maidstone.....	32,310	160	124	239	213	Stockport .....	85,672	462	398	699	568
Brighton.....	46,742	232	219	372	260	Macclesfield ..	56,018	294	255	424	368
Isle of Wight ..	42,547	186	121	178	150	Great Brough- ton (including Chester).....	49,085	208	227	342	277
Portsea Island ..	53,036	345	239	433	397	Liverpool .....	223,054	1,962	1,963	2,946	5,669
Winchester .....	23,044	97	89	141	135	West Derby } (adjoining Liverpool) ..	88,652	602	633	1,144	1,284
Windsor.....	20,502	100	78	95	73	Blackburn .....	75,091	474	382	544	458
Total .....	218,181	1,120	870	1,458	1,228	Preston .....	77,189	450	458	641	523
<i>South Midland Division.</i>						Rochdale .....	60,577	316	362	429	329
St. Albans.....	17,051	100	85	114	65	Bury .....	77,496	380	385	643	482
Wycombe .....	34,150	180	141	156	129	Bolton .....	97,519	534	594	821	738
Oxford .....	19,701	90	89	194	88	Wigan .....	86,032	353	316	611	550
Northampton ..	28,103	162	182	221	179	Prescott .....	43,739	174	212	322	348
Bedford .....	31,767	175	182	254	236	Chorlton .....	93,736	653	607	1,099	822
Cambridge .....	24,453	133	125	148	136	Manchester.....	192,408	1,442	1,363	2,354	2,783
Total .....	155,225	840	804	1,087	833	Salford .....	70,228	416	438	795	549
<i>Eastern Division.</i>						Ashton .....	173,964	917	897	1,410	1,332
Colchester.....	17,790	125	89	127	118	Total .....	1,530,460	9,617	9,490	18,224	17,980
Ipswich .....	25,234	135	119	240	143	<i>York Division.</i>					
Norwich .....	61,846	306	308	451	243	Sheffield .....	85,076	493	446	1,039	561
Yarmouth.....	24,031	115	143	196	133	Huddersfield ..	107,140	447	470	716	621
Total .....	128,921	681	659	1,014	637	Halifax .....	109,175	458	565	646	550
<i>South Western Division.</i>						Bradford .....	132,164	861	990	1,115	856
Devizes .....	22,130	84	95	115	105	Leeds & Hunslett	168,667	997	943	1,369	1,328
Dorchester.....	23,380	99	97	116	99	Hull .....	41,130	258	273	487	401
Exeter .....	31,333	160	160	191	175	York .....	47,779	247	223	342	391
St. Thomas .....	47,105	210	149	233	145	Total .....	691,131	3,761	3,910	5,714	4,708
Plymouth .....	36,527	257	191	279	195	<i>Northern Division</i>					
Redruth .....	48,062	419	172	175	178	Sunderland .....	56,226	267	291	475	461
Penzance .....	50,100	475	166	218	186	Gateshead .....	38,747	225	165	473	279
Bath .....	69,232	361	336	362	297	Tynemouth .....	55,625	239	293	508	323
Total .....	327,869	2,065	1,366	1,689	1,378	Newcastle-on- Tyne.....	71,850	414	421	857	536
<i>Western Division.</i>						Carlisle .....	36,084	164	152	282	279
Bristol .....	64,298	435	347	406	349	Cockermouth ..	35,676	146	131	203	245
Clifton .....	66,233	350	323	436	340	Kendal .....	34,694	154	147	191	168
Stroud .....	38,920	185	163	199	148	Total .....	328,902	1,609	1,600	2,989	2,291
Cheltenham .....	40,221	191	138	195	155	<i>Welsh Division.</i>					
Hertford .....	34,427	184	172	183	144	Aberbavenny ..	50,834	250	254	292	289
Shrewsbury .....	21,529	169	91	109	155	Pontypool .....	25,037	97	132	119	127
Worcester .....	27,130	180	106	173	159	Merthyr Tydvil	52,664	397	302	373	436
Kidderminster ..	29,408	167	165	162	117	Newtown .....	25,958	101	135	86	120
Dudley .....	86,028	465	457	744	632	Wrexham .....	39,542	163	160	224	164
Walsall .....	34,274	168	157	288	257	Holywell .....	40,787	178	183	211	200
Wolverhampton ..	80,722	523	438	687	774	Anglesey .....	38,105	122	149	160	156
Wolstanton .....	52,669	163	164	315	232	Total .....	273,127	1,308	1,315	1,465	1,492
Birmingham.....	138,187	532	694	1,627	1,161	Ditto, exclu- sive of the Metropolis ..	4,664,589	26,957	25,152	38,826	36,292
Aston .....	50,928	316	195	469	260	Grand Total ..	6,612,800	38,933	36,139	51,427	49,479
Coventry.....	31,028	229	188	300	158						
Total .....	776,002	4,657	3,798	6,284	5,041						

\* The mortality of the districts of Wandsworth and Lewisham, and sub-district of Hampstead, is included in the above table, in each of the four years, though the deaths in Wandsworth did not appear in the Weekly Metropolitan Returns till 1844; nor those of Lewisham and Hampstead till 1847.

† The last quarter in London ended September 25, 1847.

‡ The former District of Leeds is now divided into the districts of *Leeds* and *Hunslett*, both included in the present return.

## MORTALITY OF THE METROPOLIS.

*A Table of the Mortality in the Metropolis, showing the Number of Deaths from all Causes, in the Quarters ending September of the Four Years, 1844-45-46-47.*

CAUSES OF DEATH.	Quarters ending September*.				CAUSES OF DEATH.	Quarters ending September*.			
	1844.	1845.	1846.	1847.		1844.	1845.	1846.	1847.
ALL CAUSES.....	11,825	10,842	12,409	13,187	III. Cephalitis.....	164	159	165	131
SPECIFIED CAUSES .....	11,797	10,802	11,364	13,158	Hydrocephalus ....	413	421	448	415
I. Zymotic (or Epi- demic, Endemic, and Contagious) Diseases .....	3,233	2,409	3,234	4,061	Apoplexy .....	237	266	273	276
SPORADIC DISEASES.					Paralysis .....	166	184	221	226
II. Dropsy, Cancer, and other Diseases of uncertain or va- riable Seat .....	1,239	1,111	1,411	1,535	Convulsions.....	721	608	513	521
III. Diseases of the Brain, Spinal Marrow, Nerves, and Senses .....	1,929	1,597	1,914	1,831	Tetanus .....	9	4	2	4
IV. Diseases of the Lungs and of the other Organs of Respiration .....	2,782	2,669	2,761	2,652	Chorea .....	2	4	1	1
V. Diseases of the Heart and Blood Vessels .....	326	371	351	369	Epilepsy.....	54	78	74	70
VI. Diseases of the Stomach, Liver, and other Organs of Digestion .....	1,027	1,099	1,356	1,284	Insanity .....	19	8	25	27
VII. Diseases of the Kid- neys, &c.....	90	101	138	122	Delirium Tremens..	22	33	44	29
VIII. Childbirth, Diseases of the Uterus, &c. ....	124	120	132	146	Disease of Brain, } &c.....	122	132	148	131
IX. Rheumatism, Dis- eases of the Bones, Joints, &c. ....	84	71	116	109	IV. Laryngitis.....	7	17	25	28
X. Diseases of the Skin, Cellular Tissue, &c.....	12	27	29	45	Quinsy .....	32	5	14	16
XI. Old Age.....	648	569	487	540	Bronchitis .....	140	191	271	330
XII. Violence, Privation, and Intemperance .....	298	358	435	464	Pleurisy .....	23	28	30	35
I. Small Pox .....	556	76	51	320	Pneumonia .....	617	600	399	409
Measles .....	255	688	78	521	Hydrothorax .....	38	46	32	34
Scarlatina .....	1,020	194	208	316	Asthma .....	104	101	95	96
Hooping Cough .....	167	385	355	238	Phthisis or Con- sumption .....	1,681	1,558	1,784	1,581
Croup .....	76	75	66	62	Disease of Lungs, &c	140	123	111	123
Thrush .....	120	105	113	82	Pericarditis .....	28	12	20	20
Diarrhœa .....	414	449	1,549	1,196	Aneurism .....	8	11	10	18
Dysentery .....	44	43	75	143	Disease of Heart, &c.	290	348	321	331
Cholera .....	47	26	197	98	Teething.....	233	217	138	163
Influenza .....	8	8	6	6	Gastritis .....	15	18	28	24
Ague .....	6	6	1	6	Enteritis .....	264	212	213	190
Remittent Fever.....	13	8	12	23	Peritonitis.....	26	31	56	57
Typhus .....	424	273	403	855	Tabs Mesenterica..	136	183	343	306
Erysipelas .....	85	56	92	126	Worms .....	6	19	9	10
Syphilis .....	8	17	28	29	Ascites .....	27	19	26	21
Hydrophobia .....	..	..	..	..	Ulceration (of In- testines, &c.) ..	18	38	43	41
II. Inflammation .....	7	..	..	..	Hernia .....	20	18	36	28
Hæmorrhage .....	36	29	26	27	Colic or Hæm .....	37	29	35	45
Dropsy .....	312	227	140	171	Intussusception ..	3	14	8	18
Abscess .....	30	19	14	31	Stricture .....	5	5	11	7
Noma .....	..	7	3	9	Hæmatemesis .....	13	7	16	15
Mortification .....	45	34	34	41	Disease of Sto- mach, &c. ....	86	93	116	102
Purpura .....	7	11	9	22	Disease of Pancreas	..	..	..	1
Scrofula .....	45	32	84	68	Hepatitis .....	21	33	71	56
Cancer .....	121	160	195	194	Jaundice .....	28	29	42	41
Tumour .....	11	8	4	3	Disease of Liver, &c.	89	135	162	153
Gout .....	10	11	19	10	Disease of Spleen ..	..	3	3	1
Atrophy .....	201	233	473	481	VII. Nephritis .....	5	4	6	5
Debility .....	287	221	299	298	Ischuria .....	..	..	2	2
Malformations .....	25	28	48	54	Diabetes.....	2	13	8	9
Sudden Deaths.....	103	91	63	126	Cystitis .....	3	3	7	10
					Stone .....	7	11	9	7
					Stricture .....	17	11	13	8
					Disease of Kidneys, } &c.....	56	59	13	81
					VIII. Childbirth.....	82	70	80	91
					Paramenia.....	1	4	4	6
					Ovarian Dropsy ..	3	6	13	3
					Disease of Uterus, } &c.....	38	40	35	45
					IX. Arthritis .....	1	1	..	3
					Rheumatism .....	31	31	62	45
					Disease of Joints, ( } &c.....	52	39	54	61
					X. Carbuncle.....	11	3	1	3
					Phlegmon .....	1	5	7	7
					Ulcer .....	1	6	9	20
					Fistula .....	3	7	3	2
					Disease of Skin, &c.	6	6	9	13
					XI. Old Age .....	648	569	487	540
					XII. Intemperance ..	8	14	29	23
					Privation .....	3	2	3	16
					Violent Deaths .....	282	342	403	425
					Causes not specified	28	40	45	29

\* The mortality of the district of Lewisham, and sub-district of Hampstead, was included in the Metropolitan returns at the commencement of 1847, for the first time. Therefore the deaths for previous years are not contained in the above table. In the Quarters ending September they were respectively (1840) 161; (1841) 159; (1842) 160; (1843) 138; (1844) 151; (1845) 145; (1846) 192.

† Under the head of "sudden deaths" are classed not only deaths described as sudden, of which the cause has not been ascertained or stated; but also all deaths returned by the Coroner in vague terms, such as "found dead," "natural causes," &c., &c.

## QUARTERLY METEOROLOGICAL TABLE

Compiled from the Weekly Tables furnished to the Registrar-General by the Astronomer Royal.

THERMOMETERS.										In the Water of the Thames at Greenwich by the Self-Registering Thermometer read at 9 o'clock.		Difference between the mean temperature of the week, and the mean temperature of the same week on an average of 25 years.		WIND.		Rain in inches [7 days.]		Deaths at Three Ages, exclusive of violent and sudden Deaths					
1847 Weeks ending	Phases of the Moon.	Mean height of the Barometer from 750 inches, corrected and reduced to 32° degrees Fahrenheit.	Mean.			Dew Point.	Self-Registering.		Mean of 72 observations weekly.	Mean of 72 results.	Difference between the greatest on each day, 6 observations.		Mean of the least on each day, 6 observations.	General Direction.	Greatest pressure in the week.	Mean for the week.	The amount of Horizontal movement of the air in each week.	Mean amount of Cloud, 0-10.	0 to 15.	15 to 60.	60 and upwards.	Deaths from all causes, exclusive of violent and sudden Deaths.	
			Highest in the Sun.	Lowest on the Grass.	During the week.		Mean of 7 observations.	Of the highest on each day from 7 observations.			Of the lowest on each day from 7 observations.	Mean of 72 differences.											
July	3 Full, June 28th	30.112	76.7	51.3	71.6	54.2	17.4	61.3	54.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
"	10 Last qr., July 5th	29.829	84.0	49.0	77.0	55.2	21.8	65.5	57.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
"	17 New, 12th	29.990	85.0	58.5	82.0	60.0	22.0	70.2	61.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
"	24 1st quarter, 19th	29.880	76.5	47.5	72.6	53.3	19.3	63.1	54.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
"	31 Full, 27th	29.916	81.7	48.1	77.8	54.8	23.0	65.9	55.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aug.	7 Last qr., Aug. 3rd	29.651	84.4	43.9	73.1	51.9	21.2	62.6	53.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
"	14 New, 11th	29.939	82.0	49.4	73.9	53.7	20.2	63.2	56.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0
"	21 1st quarter, 19th	29.966	79.2	52.9	71.2	53.7	12.5	64.1	61.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
"	28 Full, 26th	30.010	79.0	43.0	70.2	50.8	19.4	60.3	53.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sept.	4 Last qr., Sept. 1st	29.775	66.4	13.0	61.3	46.5	15.3	54.3	49.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
"	11 New, 9th	29.871	70.7	30.0	66.2	47.2	19.0	56.3	51.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
"	18 1st quarter, 17th	29.542	64.0	43.0	61.1	47.9	13.2	54.1	50.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0
"	25 Full, 24th	29.901	67.4	43.2	63.1	43.0	14.3	56.1	51.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mean, Highest, or Lowest of the 13 weeks.		29.871	36.0	35.0	70.9	52.5	18.4	61.3	54.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0

\* The ages of 12 were not specified in the Returns.

+ Deaths enumerated under the heads "violent" and "sudden," chiefly consist of cases returned by the Coroner, many of which are registered, not when they occur, but at uncertain periods; and they are, therefore, excluded from this comparison of weeks.

REMARKS ON THE WEATHER DURING THE QUARTER ENDING  
SEPTEMBER 30th, 1847.By JAMES GLAISHER, Esq., *of the Royal Observatory, Greenwich.*

THE depression of temperature below the average which took place from the 7th of June to the end of the month, continued till the 4th of July. On July 5th a period of hot weather set in, and from this time to the end of the month, the average daily temperature was, with very slight exceptions, above that of the season; the period between the 11th and the 16th was the hottest during the year. The daily temperatures during the first and last weeks of August were at or below the average, and above the average during the remainder of the month. The month of September was cold, the temperature being, nearly every day throughout the month, below that of the season.

The mean temperature of July at Greenwich was  $65^{\circ}4$ , which is  $0^{\circ}9$  above that of 1846;  $5^{\circ}6$  above that of 1845;  $4^{\circ}0$  above that of 1844;  $4^{\circ}5$  above that of 1843;  $5^{\circ}2$  above that of 1842;  $7^{\circ}6$  above that of 1841; and  $4^{\circ}6$  above the average of those six years.

The mean temperature of August at Greenwich was  $62^{\circ}1$ , which is  $1^{\circ}1$  above the average for the six preceding years.

The mean temperature for September at Greenwich was  $52^{\circ}3$ , which is  $3^{\circ}1$  below the average for the six preceding years. The low temperature for this month is very remarkable.

The mean temperature for the quarter at Greenwich was  $60^{\circ}6$ , which is  $1^{\circ}9$  above that for 1844;  $3^{\circ}7$  above that for 1845;  $2^{\circ}0$  below that for 1846; and  $1^{\circ}4$  above the average for the quarter for the six preceding years.

The mean temperature of evaporation for the quarter at Greenwich was  $57^{\circ}0$ , which is  $2^{\circ}1$  above that for 1844;  $2^{\circ}7$  above that for 1845; and  $1^{\circ}9$  below that for 1846.

The mean temperature of the dew point for the quarter was  $54^{\circ}1$ , which is  $0^{\circ}7$  above that for 1844;  $1^{\circ}9$  above that for 1845;  $2^{\circ}2$  below that for 1846; and very nearly the same as the average for the six preceding years.

The mean weight of water in a cubic foot of air for the quarter was 4.8 grains, which is 0.1 grain less than the average for the preceding six years.

The additional weight of water required to saturate a cubic foot of air was 1.1 grain, the average for the preceding six years was 1.0 grain.

The mean degree of humidity of the atmosphere for the quarter was 0.814, which is very nearly the average value as deduced from the six preceding years.

The mean elastic force of vapour for the quarter, was 0.429 inches, which is nearly the average for the six preceding years.

The average weight of a cubic foot of air under the average temperature, humidity, and pressure, was 527 grains, and the average weight for the six preceding years was 526 grains.

The rain fallen at Greenwich within the quarter was 4.7 inches in depth; this quantity is about one-half of the usual amount collected.

The horizontal movement of the air was about 840 miles weekly, being somewhat less than the average amount.

The temperature of the Thames water was  $65^{\circ}2$  by day, and  $62^{\circ}9$  by night. The water on an average was  $3^{\circ}5$  warmer than the air.

The highest and lowest readings of the thermometer in air at the height of four feet above the ground, and protected as much as possible from the effects of radiation and rain, were  $86^{\circ}0$  and  $33^{\circ}5$ , as taken from the two-hourly observations; those readings, therefore, are not the true maximum and minimum readings, unless such happened at the times of observation.

The average daily range of the readings of thermometers in air at the height of four feet, was  $18^{\circ}5$ , which is about  $2^{\circ}$  above the average amount.

In July the reading of the thermometer on grass was below  $40^{\circ}$  on five nights;

the lowest reading was  $36^{\circ}5$ . In August it was below  $40^{\circ}$  on five nights, and the lowest reading was  $32^{\circ}$ . In September it was below  $40^{\circ}$  on seventeen nights, on ten of which it was below  $32^{\circ}$ , and the lowest reading was  $24^{\circ}$ .

The hot weather in July alluded to above, was general between the latitudes of  $51^{\circ}$  and  $53^{\circ}$ , except within a few miles of the southern coast. It does not seem to have extended beyond latitude  $53^{\circ}$ . The most intense heat seems to have been experienced at the inland parts of Sussex. From the subjoined tables, it appears the reading of the thermometer at Uckfield, attained the great height of  $98^{\circ}$ . This reading, I am inclined to think, was much above the true temperature of the air, and probably was caused by great reflexion of heat. In a letter addressed to me by Mr. Prince, he states that Uckfield is situated upon a light, very dry and sandy soil, and such as reflects heat freely. Mr. Prince has kindly furnished me with the maximum and minimum readings of his thermometer on every day in the month of July, and these were nearly identical with those I took myself, except on the 13th, 14th, and 15th, which readings were  $95^{\circ}$ ,  $98^{\circ}$ , and  $93^{\circ}$  respectively. In consequence of these high readings, Mr. Prince took additional observations, as follows:—

On July 11th, at 11<sup>h</sup>. A.M. the reading of the thermometer was  $84^{\circ}$ .

On July 12th, at 9<sup>h</sup>. A.M. the reading was  $78^{\circ}$ ; at 4<sup>h</sup>. P.M. it was  $83^{\circ}$ ; and at 6<sup>h</sup>. P.M. it was  $76^{\circ}$ .

On July 13th, at 9<sup>h</sup>. A.M. the reading was  $80^{\circ}$ ; at 11<sup>h</sup>. A.M. it was  $93^{\circ}$ ; at 4<sup>h</sup>. P.M. it was  $91^{\circ}$ ; and at 6<sup>h</sup>. P.M. it was  $83^{\circ}$ .

On July 14th, at 9<sup>h</sup>. A.M. the reading was  $80^{\circ}$ ; at 11<sup>h</sup>. A.M. it was  $88^{\circ}$ ; at 4<sup>h</sup>. P.M. it was  $86^{\circ}$ ; and at 6<sup>h</sup>. P.M. it was  $80^{\circ}$ .

It seems, however, certain that the greatest degree of heat took place at the inland parts of Sussex.

This hot weather seems to have been very much modified in the counties of Cornwall and Devonshire, at Brighton, Liverpool, and Whitehaven, in fact, everywhere in the vicinity of the sea.

The approximate mean monthly temperatures for other places besides Greenwich are shown in the subjoined Table, and they differ but little in each month from those at Greenwich, at all places south of latitude  $54^{\circ}$ . The influence of height, however, is very strongly marked, in lowering the temperature, as at Beckington, in Somersetshire, whose height above the level of the sea is estimated at 265 feet; this influence is not shown at Hartwell, whose height above the sea is estimated at 300 feet; it is possible that the thermometers by which the latter observations have been made are somewhat in error, or the instruments may have been badly placed.

The monthly mean temperatures of those places in Cornwall and Devonshire in July was *below* that of the other places; in August was nearly the same; and in September was *above* those of other places.

The climate of Cornwall and Devonshire, as shown by these returns, is not only different from every other part of England, but is far from being the same in different parts of these counties. The average daily range of temperature, and extreme monthly range are smaller than elsewhere, but different at the different stations. The average daily range of temperature for the two counties is  $12^{\circ}9$ ; at Falmouth it is  $9^{\circ}5$  only, which is  $3^{\circ}4$  less than the mean for the two counties, or in other words, is one-fourth part less; at Exeter the average daily range is  $17^{\circ}2$ , which is nearly the double of that at Falmouth. The mean temperature at Falmouth was no less than  $3^{\circ}8$  less than that at Torquay; the average quarterly range of the reading of the thermometer shewing the temperature of the air for the two counties was  $35^{\circ}5$ ; but that at Helston was  $9^{\circ}5$  larger, and that at Falmouth was  $7^{\circ}5$  smaller than the average. The highest reading in the quarter was at Helston, and the lowest was at Exeter, and these two extreme readings differed very much from the extreme readings at the other places. In fact, there seems to be several different climates in these counties, but all of them free from extreme and sudden changes of temperature.

On September 24th an aurora was seen at many places in the south of England, and particularly in Cornwall. During the whole of this day the magnetic instruments at Greenwich were very much disturbed. The several instruments changed their positions very frequently and to large amounts. At Greenwich several streamers of the aurora were seen.

QUARTERLY METEOROLOGICAL TABLE.

NAMES OF THE PLACES.	Mean Pressure of the Atmosphere of Dry Air reduced to the Level of the Sea.	Mean Temperature of the Air.	Highest Reading of the Thermometer.	Lowest Reading of the Thermometer.	Mean Daily Range of Temperature.	Range of the Ther- mometer.	WIND.		Mean Amount of Cloud 0-10.	Number of Days on which it fell.	RAIN.		Mean additional weight required to saturate a Cubic Foot of Air.	Mean Degree of Hu- midity.	Mean whole amount of Water in a Ver- tical Column of Atmosphere.	Mean weight of a Cubic Foot of Air.	Height of Cistern of the Barometer above the Level of the Sea.
							Strength 0-6.	General Direction.			Amount Col- lected.	Gr.					
Helston .....	29.610	59.4	88.0	43.0	13.7	45.0	1.1	s.w.	1.7	28	5.2	5.0	0.7	0.867	6.6	528	106
Falmouth .....	..	56.7	73.0	45.0	9.5	28.0	2.0	Variable.	6.8	30	4.9	..	..	..	..	..	..
Truro .....	..	58.3	73.0	44.0	10.9	29.0	0.8	N.W.	6.0	24	5.2	..	..	..	..	..	..
Torquay .....	29.659	60.5	80.0	41.0	13.2	36.0	2.1	N.E.	..	28	3.5	4.7	1.2	0.792	6.0	530	120
Exeter .....	..	59.0	77.5	38.0	17.2	39.5	1.3	N.	6.7	34	3.0	4.9	0.8	0.806	6.4	528	..
Brighton, Black Rock.	29.633	57.7	76.0	42.0	6.8	34.0	..	Variable.	4.9	24	..	4.9	1.2	0.846	6.4	530	60
Chichester .....	..	57.7	82.0	37.0	15.6	45.0	..	s.w. & N.W.	..	..	3.1	..	..	..	..	..	..
Uckfield .....	(29.720)	60.0	98.0	31.0	25.3	67.0	..	W.	..	25	3.1	4.9	1.0	0.821	6.1	526	18
Saffron Walden .....	..	58.5	..	..	19.3	..	2.2	Variable.	4.7	45	..	(5.9)	..	..	..	..	..
Breckington, Somerset..	..	54.3	88.0	20.0	27.3	68.0	0.9	W.	..	..	..	4.7	0.1	0.890	6.0	529	265
Rt. Observ., Greenwich.	29.622	60.6	86.0	33.5	18.5	52.5	..	s.w.	6.4	34	4.7	4.9	1.1	0.814	6.0	527	150
Lewisham .....	..	59.3	88.0	31.0	20.4	57.0	..	s.w.	5.7	..	4.3	4.9	0.9	0.820	6.2	..	40
Waltham, Surrey .....	29.510	59.8	88.0	38.0	16.5	50.0	3.4	s.w.	6.7	30	4.3	4.6	1.3	0.828	5.9	528	32
Pool Cottage, Hereford	..	58.2	..	..	..	..	..	..	..	26	4.3	..	..	..	..	..	..
Cardington, nr. Bedford	..	58.7	82.0	34.0	13.5	48.0	..	..	..	30	4.4	..	..	..	..	..	..
Thwaite .....	..	..	89.0	38.0	..	51.0	0.8	s.w.	..	25	4.5	..	..	..	..	..	200
Cambridge Observatory	..	59.2	86.8	29.9	22.3	56.9	1.0	W.S.W.	6.7	36	5.0	4.5	1.2	0.823	5.9	532	88
Norwich .....	29.574	58.8	83.0	39.0	14.7	44.0	..	s.w.	..	31	3.6	4.8	0.9	0.853	6.2	531	39
Hartwell, nr. Aylesbury	29.482	58.7	88.0	29.0	24.7	59.0	0.9	Variable.	5.8	..	4.1	4.6	1.0	0.812	6.1	526	300
Derby .....	..	56.8	80.0	31.0	17.9	49.0	..	W.	..	39	4.8	4.3	1.0	0.763	5.9	530	..
Highfield House .....	29.482	60.6	88.0	37.5	16.7	50.5	1.6	s.w.	5.3	32	4.3	4.8	1.2	0.811	5.9	524	204
Liverpool Observatory.	29.626	59.1	76.8	44.5	9.9	32.3	1.1	N.W.	5.6	43	9.3	4.1	1.3	0.819	5.8	533	37
Whitlaven .....	..	56.7	75.5	38.0	12.5	37.5	..	s.w.	..	46	9.0	4.4	1.4	0.826	5.7	531	..
Durham .....	29.557	54.4	83.2	29.8	16.0	53.4	1.7	s.w. & N.W.	5.6	27	2.2	4.4	0.5	0.829	5.3	526	347
Newcastle .....	29.494	55.5	77.0	33.0	13.6	44.0	..	s.w.	..	28	4.7	4.9	0.3	0.943	6.4	529	121
No. of Column .....	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17

From the numbers in the first column it appears that the volume of dry air was very nearly the same at all parts of the country; the differences between the numbers at different places are quite within the limits of the probable error of the barometers, as so few have been compared with standards. The mean of all the results in the first column, except that of Uckfield, is 29·568 inches, and this may be considered as the pressure of dry air for England during the quarter ending September 30, 1847.

From the numbers in the second column, we find for the quarter ending September 30, 1847, that the mean temperature of the counties of Cornwall and Devonshire was 58°8, and for the remaining counties, except N. of latitude 54°, was 58°8, and that the mean temperature of Durham and Newcastle was 55°0.

The average daily range of the temperature in Cornwall and Devonshire was 12°9; at places near the sea, not including those in the above counties, it was 10°7; and the mean at all other places was 19°2. The daily range at Brighton is remarkably small; the next in order of magnitude are those of Liverpool, Newcastle, Cardington, &c. The greatest mean daily ranges were at Beckington, Uckfield, Hartwell, and Cambridge.

The highest reading during the quarter was at Uckfield, which was 98°, and the lowest was at Beckington, which was 20°. The extreme range of temperature in England, during the quarter, was therefore 78°, or if we used the next highest reading, viz., that at Thwaite, the range would be 69°.

The average quarterly range of the thermometer in Cornwall and Devonshire was 35°5; at Brighton, Liverpool, Whitehaven, and Newcastle was 37°, and at the remaining places it was 53°7. The ranges at Beckington and Uckfield were the greatest.

The wind in the counties of Cornwall and Devonshire seem to have blown in a circle, for the direction of each place is different. The mean direction for all the remaining places is S.W., except at Liverpool where it was N.W., and at Durham where it was N.N.W.

From the numbers in the ninth column it would seem that the distribution of cloud has been nearly the same at all parts of the country, and such as to cover less than three-fifths of the whole sky.

The fall of rain has been the largest at Liverpool and Whitehaven, and it has fallen on a greater number of days at those places than at any others. The amount at other places is about one-half the usual fall in the quarter ending September 30. At Durham the fall has been the least in amount, and the next in order are those at Exeter, Chichester, Uckfield, &c.

Columns 12—16 contain the mean hygrometrical results, and those are nearly identical at all places, except at Saffron Walden; at this place the average weight of water in a cubic foot of air is stated to be 5·9 grains, but at the mean temperature of 58°5, the greatest possible quantity, if the air had been always saturated, is 5·7 grains, so that it is evident that either the instruments are bad, or they have been badly placed.

The mean weight of vapour in a cubic foot of air for England (excepting Cornwall and Devonshire) in the quarter ending September 30, was 4·8 grains.

The mean additional weight required to saturate a cubic foot of air in the quarter ending September 30, was 1·0 grain.

The mean degree of humidity in the quarter ending September 30, was 0·835 grains.

The mean amount of vapour mixed with the air would have produced water, if all had been precipitated at one time on the surface of the earth, to the depth of 6 inches in the quarter ending September 30.

The mean weight of air under its average heat, humidity, and pressure was 527 grains.

And those values for Cornwall and Devonshire were 4·9 grains; 0·9 grains; 0·822 grains; 6·3 inches and 529 grains respectively.

## REVENUE.

*Abstract of the Net Produce of the Revenue of Great Britain in the Years and Quarters ending 5th January, 1847 and 1848; showing the Increase or Decrease thereof.—(Continued from page 373, vol. x.)*

Sources of Revenue.	Years ending 5th January.			
	1847.	1848.	Increase.	Decrease.
	£	£	£	£
Customs.....	18,310,865	18,015,298	....	295,567
Excise .....	12,521,250	11,730,746	....	790,504
Stamps .....	6,931,414	6,959,546	28,132	....
Taxes.....	4,272,408	4,334,561	62,153	....
Property Tax .....	5,395,391	5,450,801	55,410	....
Post Office.....	816,000	864,000	48,000	....
Crown Lands.....	120,000	77,000	....	43,000
Miscellaneous .....	317,090	184,926	....	132,164
Total Ordinary Revenue ....	48,684,418	47,616,878	193,695	1,261,235
China Money .....	667,644	....	....	667,644
Imprest and other Moneys .	192,547	216,642	24,095	....
Repayments of Advances....	1,070,411	564,046	....	506,365
Total Income.....	50,615,020	48,397,566	217,790	2,435,244
	Deduct Increase .....		217,790	
	Decrease on the Year .....		2,217,454	

Sources of Revenue.	Quarters ending 5th January.			
	1847.	1848.	Increase.	Decrease.
	£	£	£	£
Customs .....	4,514,721	4,111,862	....	402,859
Excise .....	3,608,155	3,246,883	....	361,272
Stamps .....	1,740,687	1,564,855	....	175,832
Taxes.....	1,909,899	1,914,783	4,884	....
Property Tax.....	450,219	462,567	12,348	....
Post Office.....	203,000	208,000	5,000	....
Crown Lands.....	30,000	40,000	10,000	....
Miscellaneous .....	29,657	11,746	....	17,911
Total Ordinary Revenue ....	12,486,338	11,560,696	32,232	957,874
China Money .....	....	....	....	....
Imprest and other Moneys	31,884	30,614	....	1,270
Repayments of Advances ....	302,449	74,048	....	228,401
Total Income.....	12,820,671	11,665,358	32,232	1,187,545
	Deduct Increase .....		32,232	
	Decrease on the Quarter.....		£1,155,313	

*Consolidated Fund Operations.*—The total income brought to this account in the quarter ending 5th Jan., 1848, was 12,250,729*l.* The total charge upon it was 7,207,632*l.*, leaving a surplus of 5,043,097*l.*

The surplus of revenue, after providing for the charges on the Consolidated Fund, and the payment of Supply Services, in the quarter ending 5th January, 1848, was 882,548*l.*

## CORN.

*Average Prices of Corn per Imperial Quarter in England and Wales, during each Week of the Last Quarter of 1847; together with the Average Prices for the whole Quarter.—(Continued from p. 374, vol. x.)*

Returns received at the Corn Office, 1847.			Wheat.		Barley.	Oats.	Rye.	Beans.	Peas.
			Weekly Average	Aggregate Average of Six Weeks regulating Duty.	Weekly Average	Weekly Average	Weekly Average	Weekly Average	Weekly Average
Weeks ending 1847.			s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
October	2	.....	56 9	54 8	32 0	23 0	33 3	43 7	44 2
	9	.....	54 2	53 8	32 4	22 11	34 2	46 2	44 4
	16	.....	54 3	53 3	32 6	22 7	33 0	46 3	45 4
	23	.....	55 2	53 10	33 7	23 4	38 0	47 1	47 9
	30	.....	53 6	54 7	33 6	23 1	33 4	46 0	50 10
November	6	.....	52 4	54 4	32 9	23 0	34 1	46 6	49 1
	13	.....	53 8	53 10	32 4	23 4	33 7	45 9	48 3
	20	.....	54 3	53 10	32 0	22 11	32 10	45 11	49 0
	27	.....	52 11	53 8	31 6	22 10	32 10	44 6	48 6
December	4	.....	52 1	53 2	30 8	22 5	28 11	44 0	49 7
	11	.....	51 11	52 10	30 5	22 4	31 0	42 7	47 7
	18	.....	52 2	52 10	30 7	21 7	34 4	41 6	48 2
	25	.....	53 0	52 9	31 3	21 3	31 1	40 6	44 5
Average of the Quarter }			53 6	53 7½	31 11	22 7	33 1	44 7	47 5

*Foreign and Colonial Wheat and Flour imported in each of the Months ending 10th October, 5th November, and 5th December, 1847; the Quantities upon which Duties have been paid for Home Consumption during the same Months; and the Quantities remaining in Bond at the close of them.—(Continued from p. 374, vol. x.)*

## WHEAT.

Months ending.	Imported.			Entered for Home Consumption.			In Bond at the Month's end.		
	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.
1847	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.
10th Oct.	390,871	13,755	404,626	390,871	13,755	404,626	5,732	26	5,758
5th Nov.	269,673	7,388	277,061	269,684	7,388	277,072	5,723	26	5,749
5th Dec.	152,936	10,786	163,722	152,948	10,791	163,739	5,723	21	5,744

## WHEAT-FLOUR.

Months ending.	Imported.			Entered for Home Consumption.			In Bond at the Month's end.		
	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.
1847	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.
10th Oct.	959,090	286,591	1,245,681	961,238	286,590	1,247,828	18,706	2,118	20,824
5th Nov.	201,892	122,209	324,101	203,006	122,209	325,215	17,593	2,118	19,711
5th Dec.	61,449	135,893	197,342	61,447	135,892	197,339	17,594	2,118	19,712

## CURRENCY.

## BANK OF ENGLAND.

*An Account, pursuant to the Act of the 7th and 8th Victoria, c. 32, for the Weeks ending on Saturday, the 16th October, the 13th November, and the 11th December, 1847.—(Continued from p. 375, vol. x.)*

## ISSUE DEPARTMENT.

	Weeks ending		
	16th Oct., 1847.	13th Nov., 1847.	11th Dec., 1847.
	£	£	£
Notes issued .....	21,989,600	22,848,375	24,769,685
Government Debt .....	11,015,100	11,015,100	11,015,100
Other Securities .....	2,984,900	2,984,900	2,984,900
Gold Coin and Bullion .....	6,899,483	7,647,707	9,450,007
Silver Bullion .....	1,090,115	1,200,668	1,319,678
Total .....	21,989,600	22,848,375	24,769,685

## BANKING DEPARTMENT.

Proprietors' Capital .....	14,553,000	14,553,000	14,553,000
Rest .....	3,195,432	3,610,979	3,601,390
Public Deposits .....	5,496,883	5,991,765	8,229,759
Other Deposits .....	8,674,584	8,312,171	8,437,376
Seven Day and other Bills ....	903,519	884,015	861,271
Total .....	33,123,418	33,351,930	35,682,796
Government Securities, including } Dead Weight Annuities .... }	11,088,877	10,583,607	10,916,594
Other Securities .....	18,963,326	19,560,468	17,630,931
Notes .....	2,630,115	2,797,710	6,448,780
Gold and Silver Coin .....	441,100	410,145	656,491
Total .....	33,123,418	33,351,930	35,682,796

## COUNTRY BANKS.

*Average Aggregate Amount of Promissory Notes of Country Banks, which have been in Circulation in the United Kingdom, distinguishing the several Banks, or Classes of Banks by which issued in each part of the Kingdom, during the weeks ending 11th September, 9th October, and 6th November, 1847.—(Continued from p. 375, vol. x.)*

Banks.	11th Sept., 1847.	9th Oct., 1847.	6th Nov., 1847.
England—Private Banks .....	4,175,774	4,341,530	4,299,348
Joint Stock Banks .....	2,954,284	3,107,294	3,084,111
Scotland—Chartered, Private, and } Joint Stock Banks .....	3,497,525	3,559,976	3,606,718
Ireland—Bank of Ireland .....	3,026,550	3,152,200	3,274,350
Private and Joint Stock } Banks .....	2,021,760	2,203,413	2,244,964
Total .....	15,675,893	16,364,413	16,509,491

## BANKRUPTCY.

*An Analysis of the Bankruptcies in England and Wales, gazetted in each Month of the Quarter ending December 31, 1847; showing the Counties and Branches of Industry in which they have occurred.—(Continued from p. 376, vol. x.)*

COUNTIES.	October.	November.	December.	TRADES.	October.	November.	December.
Metropolis.....	35	56	63	<i>Agriculture and connected Trades.</i>			
Bedford .....	2	2	4	Farmers .....		1	....
Berks .....	1	....	1	Agricultural Implement } .....	2	6	1
Bucks .....	....	....	2	Makers, &c. } .....			
Cambridge .....	1	4	2	Corn Factors .....	1	4	3
Cheshire .....	....	1	2	Millers and Malsters .....	4	5	6
Cornwall .....	1	....	....	Hop Merchants .....	....	1	....
Cumberland .....	....	....	....	Brewers .....	1	4	4
Derby .....	1	....	1	Horse and Cattle Dealers, and } .....	2	2	1
Devon .....	2	5	7	Woolstaplers .....			
Dorset .....	....	....	....	<i>Mining and connected Trades.</i>			
Durham .....	1	....	1	Mining Firms .....	....	....	....
Essex .....	2	2	4	Blasting Works .....	....	....	....
Gloucester .....	4	1	2				
Hants .....	1	1	2	<i>Manufactures.</i>			
Hereford .....	....	....	1	Woollen Manufacturers .....	5	2	5
Hertford .....	....	1	....	Cotton „ .....	5	4	2
Huntingdon .....	....	....	....	Linen „ .....	2	6	3
Kent .....	2	7	1	Silk „ .....	....	2	1
Lancashire.....	26	41	42	Printers and Dyers .....	2	2	1
Leicester .....	....	2	2	Lace Manufacturers .....	....	1	....
Lincoln .....	2	3	....	Hosiery „ .....	3	4	5
Middlesex (exclusive } of the Metropolis) }	14	11	10	Hardware „ .....	....	....	....
Monmouth.....	1	....	....	Earthenware „ .....	....	....	....
Norfolk .....	....	1	....	Glass „ .....	....	....	....
Northampton.....	....	....	4	Paper „ .....	1	3	4
Northumberland .....	2	6	6	Builders .....	6	4	13
Nottingham .....	3	3	2	Miscellaneous Manufacturers.....	23	15	5
Oxford .....	1	2	2	<i>Commerce.</i>			
Rutland .....	....	....	....	Bankers and Merchants .....	12	33	27
Salop .....	2	....	2	Shipowners, Warehousemen, } .....			
Somerset (including } Bristol) }	8	12	14	Brokers, and Wholesale } .....	6	2	9
Stafford .....	2	3	5	Dealers generally .....			
Suffolk .....	1	4	4	<i>Retail and Handicraft Trades.</i>			
Surrey (exclusive of } the Metropolis) }	4	4	7	Bakers .....	3	7	1
Sussex .....	3	1	1	Butchers .....	2	....	3
Warwick .....	5	16	9	Corn and Hay Dealers .....	4	....	....
Westmoreland .....	....	....	2	Innkeepers and Victuallers.....	6	8	21
Wilts .....	....	4	....	Wine and Spirit Merchants .....	....	....	....
Worcester .....	....	1	....	Dealers in Grocery, Drugs, } .....	10	13	12
York (East Riding) .....	2	....	2	and Spices .....			
„ (North Riding) .....	....	2	1	Makers of, and Dealers in, } .....	9	19	21
„ West Riding .....	3	8	9	Clothing .....			
Wales .....	1	2	2	Makers of, and Dealers in, } .....	....	1	1
				Furniture .....			
				Coach Builders .....	1	2	2
				Miscellaneous .....	23	55	68
Total .....	133	206	219	Total.....	133	206	219

# QUARTERLY JOURNAL

OF THE

## STATISTICAL SOCIETY OF LONDON.

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MAY, 1848.

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### *Fourteenth Annual Report of the Statistical Society of London* Session 1847-8.

In the present annual statement, the Council have pleasure in reporting that there has been no decrease in the number of Fellows composing the Society, in the course of the past year, notwithstanding the unusual number of its losses by death in addition to the ordinary proportion of withdrawals; for the number of new elections has been 21, while the number of deaths and withdrawals has amounted only to 17. Considering the various unhappy features presented by the history of the past year, this is a small number to have lost. Indeed, an increase of 4 to the total number of Fellows would still remain, if a strict adherence to our rules with regard to the payment of subscriptions did not compel the Council to order the names of 4 others to be expunged from the list of Fellows, after suspension as defaulters. The number of *bonâ fide* Members of the Society is thus seen to be the same as at the close of the two last years, viz., 412.

Financially the Society is precisely in the condition in which it found itself at the close of the last preceding year, with no current liabilities which assets as good as money received will not discharge, except about £100 for printing, which the Council had anticipated defraying out of the current income in the course of the past year; but this purpose has been defeated by the unusual difficulties recently experienced in the collection of a part of the subscriptions, to such an extent as to add no less than £140 to the amount of arrears due at the close of the preceding official year. A larger portion than usual of these arrears being, however, within reach of recovery, the true statement is, that the means of defraying this hundred pounds of arrears, which has hung on the face of the Society's accounts almost from its foundation, now presents itself in the augmented amount of recoverable arrears for the past year, instead of existing in an estimate of the collections for the next. In every other respect the Society's affairs have taken the course indicated in the Report of 1846.

The Committee for inquiring into the condition of the poorer classes of St. George's in the East, (which we have commonly designated

Mr. Hallam's Committee, from the liberal donation for that purpose by Mr. Hallam, in which it originated,) has entirely closed its labours and submitted a report of their results, which awaits a favourable opportunity of being communicated to the Fellows at large in one of our monthly meetings. The result of the trifling grant to the Secretaries for Educational Statistics was communicated to them in the middle of the last session, in the form of a brief but striking report showing the educational destitution of the South Staffordshire coal and iron districts.

The solicitude with which British statisticians regard every step towards the extension of an efficient system of registration for births, deaths, and marriages, to Scotland, occasioned the appointment of a Committee of the Council, in March last, "to consider certain schedules and provisions of the proposed Registration Bill for Scotland, to recommend forms, and to communicate with the proper authorities on the subject." The schedules attached to this bill appeared to the Members of the Committee to be deficient in many respects; and to remedy these defects they drew out three new forms of schedule, and proved, by practical experiment in the Metropolis, that all the information which these forms required could be readily obtained from the public. Copies of these three forms were forwarded to Sir George Grey and the Lord Advocate of Scotland, and subsequently a deputation from the Committee waited on the Lord Advocate, and explained that the object which the Council had in view was simply to assist in securing for Scotland such a form of registration as the present advanced state of statistical science seemed to demand; and, believing that a more complete and useful form of registry than the one embodied in the proposed bill might without difficulty be carried out, it was anxious that the people of Scotland should possess that system of registration which was best calculated to exhibit their true social and civil condition. Subsequently to this interview, in which the Lord Advocate promised to give the whole subject his particular consideration, although he could not engage to adopt all the suggested alterations, it was resolved to obtain some practical test of the working of the proposed schedules in Scotland, a task which was attended with an entirely satisfactory result, under the experienced superintendence of Dr. Watt, of Glasgow, whose valuable labours have repeatedly enriched our pages, and whose subsequent early decease it is our painful duty to record. The bill, it is well known, was ultimately dropped for the session, and has not yet been re-introduced; but the amendments proposed by the Committee will be found recorded with its report in the pages of the next Number of our Journal, in the hope that, whenever the great object contemplated by this measure shall be realized, sufficient reason will be found for the adoption of the system proposed by the Committee.

In December last a Committee was appointed to investigate the state of the inhabitants and of their dwellings in Church Lane, St. Giles's, in consequence of communications made to the Council by one of its members, which involved such startling circumstances that the Council deemed it a duty to have them verified and attested, not less for the sake of the public, than to add to those stores of information for the collection of which the Statistical Society was founded. This

investigation was conducted personally by Members of the Council, and, therefore, almost entirely without cost to the Society, and its results were almost immediately communicated to the Fellows generally in their January meeting. The Report which contained them, together with "A Statement of the Mortality Prevailing in Church Lane during the Last Ten Years, and the Sickness during the Last Seven Months," were circulated by order of the Council to the number of 1,500, among the persons and classes most able and most disposed to aid in removing such deplorable features in our social condition as are witnessed in this neighbourhood.

The zeal of individual Fellows of the Society has been evinced during the past year by the communication of such papers as those on "The Vital Statistics of the East India Company's Armies in India," on "The Revenue Statistics of the Agra Government," and on "The Prices of Cerealia and other Edibles in England and India," by Lieut.-Col. W. H. Sykes, V.P.R.S.; on "The Accounts of the Bank of England under the Operation of 7 & 8 Vict., c. 32," and on "The Recent Changes in the Condition of the People of the United Kingdom," by J. T. Danson, Esq.; on "The Statistics of Prussia," by the Chevalier Bernard Hebel; on "The Moral and Educational Statistics of England and Wales," and on "The Markets of London," by Joseph Fletcher, Esq.; on "The Mortality among Her Majesty's Troops serving in the Colonies," by Lieut.-Colonel Tulloch; on "The Influence of Education, shown by facts recorded in the Criminal Tables," by G. R. Porter, Esq.; on "The Statistics of Crime in England and Wales," and on "The Census of New South Wales," by F. G. P. Neison, Esq.; on "The Progress of the Prussian Nation," by T. C. Banfield, Esq.; and on "The Resources of the Irish Sea Fisheries," by Richard Valpy, Esq.

This increasing amount of personal labour in elaborating truths which lie remote from the surface of daily life is a gratifying feature of our progress, while the efforts made by the Government during the past year to extend a good system of registration to Scotland, and to avail itself of the machinery of the English Registration Department, for the collection of a complete code of Agricultural Statistics, show how sensible its members have become of the importance of statistical analysis in dealing with the varied wants of so complicated a state of society as that by which we are surrounded.

The usual balance-sheet for the year 1847 is annexed.

*Abstract of RECEIPTS and EXPENDITURE from the 1st JANUARY to the 31st DECEMBER, 1847.*

RECEIPTS.		£	s.	d.
To Balance in the hands of the Treasurer		107	11	0
" Secretaries		7	9	7
Arrears of Subscriptions.	$\left\{ \begin{array}{l} 1 \text{ for 1843} \dots \dots \dots \text{£2 } 2 \text{ 0} \\ 3 \text{ 1844} \dots \dots \dots 6 \text{ 6 } 0 \\ 3 \text{ 1845} \dots \dots \dots 6 \text{ 6 } 0 \\ 10 \text{ 1846} \dots \dots \dots 21 \text{ 0 } 0 \end{array} \right\}$	35	14	0
Subscriptions	285 1847	598	10	0
Compositions		81	18	0
Sale of Journal		38	13	0
Balance of Charities' Committee carried to Petty Cash		1	10	0
Assets, December 31, 1847:—		£871	5	7
Balances of Grants to Committees—Church Lane Com.	£5 0 0			
Mr. Hallam's Com.	0 8 0			
House Committee	1 6 10			
Cash Balance		41	7	7
Petty Cash Balance		1	14	1
Remittance towards Arrears of Subscriptions	5 0 0			
Dividend on Stock due	59 18 1			
Price of Fixtures to be returned on expiration of lease	31 12 0			
Stock in the Reduced $\frac{3}{4}$ per Cent., £569 17s., cost £567		146	6	7
" Consols 3 per Cent., £328 15s. 4d., "	£300	867	0	0
Arrears of Subscriptions.	$\left\{ \begin{array}{l} 1 \text{ for 1840} \dots \dots \dots \text{£2 } 2 \text{ 0} \\ 2 \text{ for 1841} \dots \dots \dots 4 \text{ 4 } 0 \\ 12 \text{ for 1842} \dots \dots \dots 25 \text{ 4 } 0 \\ 15 \text{ for 1843} \dots \dots \dots 31 \text{ 10 } 0 \\ 23 \text{ for 1844} \dots \dots \dots 48 \text{ 6 } 0 \\ 34 \text{ for 1845} \dots \dots \dots 71 \text{ 8 } 0 \\ 48 \text{ for 1846} \dots \dots \dots 100 \text{ 16 } 0 \\ 66 \text{ for 1847} \dots \dots \dots 135 \text{ 6 } 0 \end{array} \right\}$	418	16	0
Deduct Amount not likely to be paid	151 4 0			
Total Assets		264	12	0
		£1,277	18	7

EXPENDITURE.		£	s.	d.
By Rent		150	0	0
Salaries		205	0	0
Housekeeping Expenses		31	5	5
Printing		288	11	0
Editing and Advertising Journal		91	5	6
Stationery		7	7	4
Parcels, including Delivery of Journal and Postages		10	6	3
Library		22	6	10
Lithography		9	14	6
Grant to Mr. Hallam's Committee		5	0	0
Grant to Church Lane Committee		5	0	0
Miscellaneous		2	7	1
Cash Balance		41	7	7
Petty Cash Balance		1	14	1
Total		£871	5	7

Liabilities, December 31, 1847:—				
Messrs. Harrison, Printers		£233	19	9
Messrs. Vacher, Stationers		13	14	0
Messrs. Gardner, Oilmen		2	5	4
Insurance		2	10	0
Messrs. Adams, Ironmongers		2	4	0
Mr. Thorpe, Bookbinder		0	10	6
Total Liabilities		£255	3	7

Examined, Audited, and Approved,  
JOHN BOWRING,  
TRAVERS TWISS,  
J. T. DANSON.

March 11, 1848.

*A Contribution towards an Investigation of the changes which have taken place in the condition of the people of the United Kingdom during the eight years extending from the harvest of 1839 to the harvest of 1847; and An Attempt to develop the connexion (if any,) between the changes observed and the variations occurring during the same period in the prices of the most necessary articles of food.* By J. T. DANSON, Esq., F.S.S., Barrister-at-Law.

[Read before the Statistical Society of London, 21st February, 1848.]

IN limiting the scope of the proposed inquiry to the period referred to in the title, I have been governed by two considerations: one arising from a view of the purpose with which, chiefly, I entered upon the subject, and the other from a careful estimate of the means by which I could best hope to accomplish it.

1. The commercial distress which has so strongly marked the year just closed would appear to be, in the main, only a recurrence of a state of things which has become, in some degree, periodical. Effects occurring repeatedly, at intervals having some appearance of regularity, seem to indicate a corresponding regularity in the recurrence of their causes;—and a desire, if not to uncover these causes, yet to begin the work, in the hope of being followed by those better fitted to accomplish it, led me to the labour, the results of which I have now the honour of presenting to the Society.

In looking back from 1847 for a period in some degree similar, the year 1839 is the first in which we find the affairs of the country in a condition so far analogous as to justify the expectation that we may here discover in operation influences of a similar character. And the eight or ten years preceding 1839 do not appear to afford any better, (if so good a) starting-point for the investigation in view.

2. Leaving the purpose of the inquiry, and looking to its means, I find, also, that the sources of information upon which principally I have to rely, do not, in general, extend much, if any, farther back than the year 1839. This remark applies particularly to the tests of the condition of the people afforded by the Reports of the Poor Law Commissioners, by the Returns of the Funds deposited in Savings' Banks, and by the Reports of the Registrar-General of Births, Deaths, and Marriages; upon which, as will appear in the sequel, we have mainly to rely, in the first and most important branch of the inquiry.

As to the method of the investigation,—regarding this paper rather as the basis of future and more ample inquiry, than as likely itself to effect the desired end, and trusting by it to pave the way for abler and better aided efforts, I have endeavoured to preserve, in the methods I have used, as much simplicity and distinctness as possible, so as to render the results of what I have done easy of adoption into the inquiries of others, wherever they may be deemed worthy of it.

The part of the inquiry to be first pursued is, obviously, that which shall develop the actual condition of the people, and the

changes which took place in it, during the period in question. And here the materials afforded by the Annual Reports of the Poor Law Commissioners seem to be first entitled to attention, as well from the nature of the information they afford, as from the extent and the comparative completeness of the arrangements under which it has been collected and recorded.

These reports furnish the means of determining two lines of variation (so to speak) extending through the period in view, one describing the varying amount of the expenditure upon the relief and maintenance of the poor, and the other the varying numbers of the persons receiving relief as paupers. The former is much affected by concurrent variations in the prices of food, and of the labour and materials required for building and repairs, and for furniture, clothing, &c., in connexion with the administration of the relief. The latter is probably also disturbed, in some degree (as an indication of the actual amount of pauperism for the time being) by variations, as well in the principles upon which the relief was administered during these eight years, as in the degree of order and economy prevailing in the details of the administration itself. It is clear, however, that of the two lines of fluctuation, the latter, that which marks the variations in *the number of persons relieved*, is the best adapted for the present purpose.

The Commissioners have, in each of their Annual Reports, stated the number of persons relieved in the Lady-day quarter\* of the preceding year, and the proportion it bore to the total population of England and Wales in 1841, as evidence, when compared with the like proportion of the year before, of the increase or decrease of pauperism. This method is obviously liable to the objection that, as the population is increasing, the proportion of pauperism to population, so deduced, cannot be true for any year after 1841; and must in every subsequent year be removed farther from the truth. But the average increment of the population is ascertainable by methods not liable to any material error. If, therefore, it be assumed that the number of persons relieved in each year is accurately stated, it is clear that whatever value may belong to a comparison of this description, as evidence of the increasing or diminishing prosperity of the people, is within easy reach.

It is generally known, that according to the census of 1821, 1831, and 1841, the population of England and Wales increased, in the first decennial period, about 16, and in the second about 14·5 per cent. For such a purpose as the present, it might suffice to assume a continuation from 1841 to 1847 of the rate of increase found to prevail between 1831 and 1841. Various considerations, however, favour the adoption of the mean annual rate of the whole twenty years, from 1821 to 1841, as the more likely to accord with the fact. This gives 1·428 per cent. as the mean rate of increase per annum. The following table presents the results of the calculation for each year, and also shows the proportion borne by the number of paupers relieved in the winter quarter, ending at Lady-day in each year, to the (computed) population of the same year.

\* That being the quarter in which, invariably, the number of paupers is greatest, in each year.

Years.	Population of England and Wales.	Number of Persons who received Relief in the Quarter ending Lady-day.	Number of Paupers to every 10,000 of the Population.	Plus or Minus per 10,000 in each year, as compared with the Average of the whole 8 years.
				Per cent.
1839.....	15,461,300	1,134,165	735	- 101 = 12·08
1840.....	15,684,000	1,199,529	763	- 73 = 8·73
1841.....	15,906,700	1,300,928	817	- 19 = 2·27
1842.....	16,132,600	1,427,187	884	+ 48 = 5·74
1843.....	16,361,600	1,546,390	945	+ 109 = 13·03
1844.....	16,593,900	1,477,561	890	+ 54 = 6·45
1845.....	16,829,600	1,470,970	874	+ 38 = 4·54
1846.....	17,068,500	1,330,557	779	- 57 = 6·81
		Average....	836	

It will be observed that there was a progressive increase in the proportion of pauperism to population, from the Lady-day quarter of 1839 to the corresponding quarter of 1843: the whole increase, during the four years, being from 735 to 945 for each 10,000 of population. But the period between Lady-day, 1843, and Lady-day, 1844, appears to have brought a change for the better, which not only stayed this progressive increase of the proportion of pauperism to population, but substituted for it a progressive decrease. There is exhibited, indeed, at the latter date, (Lady-day, 1844,) not only a diminution of this proportion, but an absolute and a considerable reduction in the numbers relieved, which reduction appears to have continued thenceforward, year by year, to the end of the period in view.

The above table affords no indication of the particular time between Lady-day, 1843, and Lady-day, 1844, at which the change for the better so strongly marked began. The extent of the change, had we no other evidence, might suffice to support the inference that it began early in the year ending Lady-day, 1844. But the Tenth Annual Report of the Poor Law Commissioners, made in May, 1844, affords evidence of a more precise description. The gradual and constant increase of the Poor Law expenditure with the increase of the numbers relieved had been watched by the Commissioners for some years with anxiety, and the first appearance of a decline excited a corresponding degree of attention. In one of the earlier pages of the Report just referred to, (the first issued after the change had been observed,) they introduce the subject thus:—"We rejoice to be able to state, that the progress of pauperism, which had been constant from the year 1837 to Lady-day, 1843, was arrested in the course of last year, and that the expenditure for the half-year ending Michaelmas, 1843, exhibits a diminution of 139,926*l.*, as compared with the corresponding half year for 1842." It will be observed that the circumstance here adduced by the Commissioners, apparently as evidence of "the progress of pauperism" having been arrested, in fact, only proves that the relief of the pauperism of the kingdom, whatever its extent, had become less expensive, which, though it answered the purpose of the Commissioners, obviously does not answer that of the present inquiry. But in the Appendix to the same Report is a table, in which is stated

the number of persons relieved in England and Wales, and also in each county, in the quarters ending respectively at Michaelmas, 1842, and Michaelmas, 1843. We are thus enabled to mark the proportion of pauperism to population, as before, at a point midway between the Lady-day quarters of 1842 and 1843; and again midway between those of 1843 and 1844. The following statement for this purpose may be considered supplementary to that already given. The number used for the population at Michaelmas of each year is the mean of the numbers used for the Lady-day quarters preceding and following.

Years.	Quarter ending.	Number of Persons who received Relief as Paupers.	Population of England and Wales (computed.)	Number of Paupers to every 10,000 of the Population.	Decrease for 10,000 between Michaelmas, 1842, and Michaelmas, 1843.
1842....	Michaelmas	1,372,642	16,247,100	<b>844</b>	....
1843....	Lady-day ....	1,546,390	16,361,600	945	....
„	Michaelmas	1,294,574	16,477,250	<b>785</b>	- 59 (6·98 per ct.)
1844....	Lady-day ....	1,477,561	16,593,900	890	....

Thus, so far as the Poor Law Returns are to be relied upon, there would appear to have been a gradual declension of the condition of the people of England and Wales generally, from the beginning of the year 1839 down to a period subsequent to Lady-day, and anterior to Michaelmas, 1843; and that from this period forward to the Lady-day quarter of 1846, there was a nearly corresponding elevation of their condition.

If, however, we examine the returns separately for each county, it soon becomes apparent that the gradual increase of pauperism down to 1843, and its subsequent decrease, as exhibited for the aggregate of England and Wales, is the result of an average, which covers great variations in different parts of the kingdom; and, in particular, that the movement, during the whole period, differed widely in the agricultural and the manufacturing districts.

In order to make the nature and extent of these variations in some degree obvious, and susceptible of more easy examination, it may be sufficient to select two groups of the districts for which separate returns are made, such as may represent, with tolerable accuracy, the agricultural and manufacturing portions of the kingdom; and, after repeating for each the calculation (as to the annual increment of the population,) previously made for the entire kingdom, to throw the results, for each group of districts, into the form already adopted.

For this purpose I select the county of Lancaster and the West Riding of the county of York, as containing the principal manufacturing districts, and not ill representing the remainder. These contained in 1841 an aggregate population of 2,821,988, and the mean annual increase in each, during the twenty years from 1821 to 1841, was,—

In Lancaster .....	2·324 per cent.
York, West Riding .....	1·845 „

To represent the agricultural districts, I take the nine counties of Northumberland, Norfolk, Suffolk, Cambridge, Bucks, Herts, Berks, Wilts, and Devon. These contain, I believe, the greater part of the purely agricultural population of the kingdom; and they also include a portion of every agricultural locality of importance. Their aggregate population in 1841 was 2,409,717, and the mean annual increase of the population in each county, during the twenty years from 1821 to 1841, was as follows:—

	Per cent.		Per cent.
Northumberland .....	1·154	Herts .....	·967
Norfolk .....	·908	Berks .....	·974
Suffolk .....	·766	Wilts .....	·789
Cambridge .....	1·509	Devon .....	·981
Bucks .....	·760		

The following table exhibits the population (computed on these bases) of each district, and group of districts, for each year, from 1840 to 1847, inclusive.

	1840.	1841.	1842.	1843.	1844.	1845.	1846.	1847.
Lancaster .....	1,629,259	1,667,064	1,705,739	1,745,312	1,785,805	1,827,245	1,869,654	1,913,119
York—W. R. ..	1,134,053	1,154,924	1,176,174	1,197,815	1,219,844	1,242,289	1,265,147	1,288,424
Totals.....	2,763,312	2,821,988	2,881,913	2,943,127	3,005,649	3,069,534	3,134,801	3,201,543
Northumberland	247,416	250,268	253,149	256,060	259,005	261,933	264,905	268,042
Norfolk .....	408,941	412,621	416,334	420,081	423,861	427,675	431,524	435,408
Suffolk .....	312,749	315,129	317,523	319,936	322,363	324,813	327,281	329,771
Cambridge .....	162,073	164,509	166,976	169,480	172,016	174,596	177,209	179,863
Bucks .....	154,819	155,989	157,169	158,359	159,559	160,769	161,989	163,219
Herts .....	155,742	157,237	158,746	160,269	161,807	163,360	164,923	166,511
Berks .....	153,676	160,226	161,780	163,349	164,933	166,532	168,146	169,775
Wilts.....	257,996	260,007	262,024	264,067	266,126	268,191	270,262	272,349
Devon .....	528,551	533,731	538,961	544,242	549,575	554,961	560,401	565,896
Totals.....	2,396,963	2,409,717	2,432,662	2,455,843	2,479,245	2,502,880	2,526,735	2,550,839
England & Wales	15,684,000	15,906,700	16,132,600	16,361,600	16,593,900	16,829,600	17,068,500	17,310,900

The computation of the annual proportion of pauperism to population in these districts, for a comparative purpose, is in some degree impeded by the circumstance that the number of Unions from which returns were received was not the same throughout. In 1840 the number was 577, and in 1846 it had been increased to 588; and the successive changes in this respect affect both groups of districts in each of the first four years observed. The correction rendered necessary by this variation involves two distinct computations for each year; and also makes it more convenient to compare each year with the one preceding than (as before) each with the average of all. Consequently the form of the table is less simple than that adopted for the entire kingdom.

## MANUFACTURING DISTRICTS.

Years.	Aggregate Population of the selected Districts.	Years compared.	Number of Unions from which Returns were received in both the years compared.	Number of Paupers relieved in the selected Districts in the Quarter ending Lady-day.	Number of Paupers to every 10,000 of the Population.	Years compared.	Increase per 10,000 in each year as compared with the year preceding.	Decrease per 10,000 in each year as compared with the year preceding.
1840*	2,763,312	{1840} {1841}	577	{102,124 {110,827	372 392	{1840} {1841}	20 (5·37 pr. ct.)	...
1841	2,821,988	{1841} {1842}	581	{121,294 {160,043	429 555	{1841} {1842}	126 (29·37 pr. ct.)	...
1842	2,881,913	{1842} {1843}	584	{176,037 {209,615	610 712	{1842} {1843}	102 (16·72 pr. ct.)	...
1843	2,943,127	{1843} {1844}	585	{214,425 {154,616	728 511	{1843} {1844}	....	217 (29·80 pr. ct.)
1844	3,005,649	{1844} {1845}	585	{154,616 {133,020	511 433	{1844} {1845}	....	78 (15·26 pr. ct.)
1845	3,069,534	{1845} {1846}	588	{133,020 {121,876	433 380	{1845} {1846}	....	53 (12·24 pr. ct.)

\* It was not till 1840, apparently, that any return was published of the numbers relieved in particular counties.

## AGRICULTURAL DISTRICTS.

Years.	Aggregate Population of the selected Districts.	Years compared.	Number of Unions from which Returns were received in both the years compared.	Number of Paupers relieved in the selected Districts in the Quarter ending Lady-day.	Number of Paupers to every 10,000 of the Population.	Years compared.	Increase per 10,000 in each year, as compared with the year preceding.	Decrease per 10,000 in each year, as compared with the year preceding.
1840	2,386,863	{1840} {1841}	577	{207,967 {219,788	870 912	{1840} {1841}	42 (4·80 pr. ct.)	...
1841	2,409,717	{1841} {1842}	581	{226,849 {240,938	941 993	{1841} {1842}	52 (5·52 pr. ct.)	...
1842	2,432,662	{1842} {1843}	584	{242,053 {254,666	995 1,037	{1842} {1843}	42 (4·22 pr. ct.)	...
1843	2,455,843	{1843} {1844}	585	{254,666 {262,808	1,037 1,060	{1843} {1844}	23 (2·21 pr. ct.)	...
1844	2,479,245	{1844} {1845}	585	{262,808 {270,207	1,060 1,079	{1844} {1845}	19 (1·79 pr. ct.)	...
1845	2,502,880	{1845} {1846}	588	{270,207 {250,243	1,079 981	{1845} {1846}	....	98 (9·08 pr. ct.)

It is apparent from these tables that the change for the better, in the proportion of pauperism to population, observed in England and Wales, generally, between the Lady-day quarter of 1843 and 1844, was, in fact, a compound result of two descriptions of change, one for the better and the other for the worse, proceeding simultaneously in different parts of the kingdom.

Referring again to the special tabular statement appended to the Tenth Annual Poor Law Report I find the number of paupers relieved in the two quarters ending respectively at Michaelmas 1842 and Michaelmas 1843, in each of the counties comprised in the selected districts, to have been as follows:—

Counties.	Number of Persons Relieved in the Quarter ending Michaelmas, 1842, in 584 Unions.	Number of Persons Relieved in the Quarter ending Michaelmas, 1843, in 584 Unions.	Increase or Decrease Per Cent.
Lancaster.....	132,082	93,378	— 29
York (West Riding) .....	78,902	66,260	— 16
<b>Totals for the Manufactg. group</b>	<b>201,984</b>	<b>159,638</b>	
Northumberland .....	20,397	22,198	+ 9
Norfolk .....	29,846	30,825	+ 3
Suffolk .....	29,849	31,556	+ 6
Cambridge .....	14,548	13,946	— 4
Bucks .....	14,400	15,096	+ 4
Herts .....	14,192	14,239	— (trifling)
Berks .....	15,076	15,900	+ 6
Wilts .....	29,382	30,041	+ 2
Devon .....	40,911	37,976	— 7
<b>Totals for the Agricultural group</b>	<b>208,601</b>	<b>211,777</b>	

The following supplementary tables, for each group of districts, display more precisely the extent and character of the movement in each, as shown at the close of the year ending with the Michaelmas quarter of 1843. The number used to express the population at the Michaelmas quarter is, as before, the mean of the numbers used for the Lady-day quarters preceding and following.

#### MANUFACTURING DISTRICTS.

Years.	Quarter ending.	Number of Unions.	Number of Persons who received Relief as Paupers.	Aggregate Population of the selected Districts (computed.)	Number of Paupers to every 10,000 of the Population.	Decrease per 10,000 between Michaelmas, 1842, and Michaelmas, 1843.
1842	Michaelmas	584	201,984	2,912,520	<b>693</b>	....
1843	Lady-day....	585	214,425	2,943,127	728	....
„	Michaelmas	584	159,638	2,974,388	<b>536</b>	— 157
1844	Lady-day....	585	154,616	3,005,649	511	(22·65 per ct.) ....

## AGRICULTURAL DISTRICTS.

Years.	Quarter ending.	Number of Unions.	Number of Persons who received Relief as Paupers.	Aggregate Population of the selected Districts (computed.)	Number of Paupers to every 10,000 of the Population.	Increase per 10,000 between Michaelmas, 1842, and Michaelmas, 1843.
1842	Michaelmas	584	208,601	2,444,252	<b>852</b>	....
1843	Lady-day....	585	254,666	2,455,843	1,037	....
„	Michaelmas	584	211,777	2,467,544	<b>858</b>	+ 6
1844	Lady-day....	585	262,808	2,479,245	1,060	(.70 per ct.) ....

## SUMMARY.

*Comparative Variations in the Number of Paupers per 10,000 of the Population.*

	In England and Wales.		In the Selected Manufacturing Districts.		In the Selected Agricultural Districts.	
	Increase.	Decrease.	Increase.	Decrease.	Increase.	Decrease.
Between the Lady-day Quarters of						
1840 and 1841 .....	54	....	20	....	42	....
1841 and 1842 .....	67	....	126	....	52	....
1842 and 1843 .....	61	....	102	....	42	....
Between the Michaelmas Quarters of						
1842 and 1843 .....	....	59	....	157	6	....
Between the Lady-day Quarters of						
1843 and 1844 .....	....	55	....	217	23	....
1844 and 1845 .....	....	16	....	78	19	....
1845 and 1846 .....	....	95	....	53	....	98

The most remarkable feature of these tables is that which exhibits the great and rapid changes of the proportion of pauperism to population in the manufacturing districts. Excepting only the last year, they appear to have constituted nearly the whole of the variations observable, in a less degree, when our view is extended to the whole kingdom. It is also worthy of remark that, though the proportion of pauperism to population was on the increase in the agricultural districts down to the Lady-day quarter of 1845, such changes as occurred in its rate of increase agreed generally with the variations shown in the manufacturing districts. The concurrent decrease of the proportion of pauperism to population in both groups of districts between Lady-day 1845 and Lady-day 1846, and the decided preponderance of the rate of decrease in the agricultural districts, seem

to point to the operation of some new cause, bearing particularly upon the population of the agricultural districts. In any extension of the view here opened, it will obviously be necessary to take into account the effect of the increased demand for field labour arising from the construction of new railways; and in this direction will probably be found the true explanation of the rapid decrease of pauperism in the agricultural districts after Lady-day 1845.

Before quitting this part of the subject, it may be desirable to notice, shortly, the fluctuations, during the same period, of the amount expended annually in the relief and maintenance of the poor in England and Wales. Though (from the interference of the element of price) the amount of this expenditure cannot be received as indicating the extent of the distress relieved, an examination of its variations during the period in view may be of service, as marking the annual variations of the burden of pauperism upon the rest of the community. Accordingly, I have, in the following table, stated the amount expended in each year, and its proportion to the computed population of the year, with the variations, annually, in relation to the average of the whole period. And further, I have deducted from the population of each year the number returned as having received relief as paupers in the Lady-day quarter of the same year, and have shown the proportion borne by the Poor Law expenditure to the population of each year, thus reduced; so as to exhibit more precisely the variations of the weight of the burden upon those who, as not being themselves paupers, had to bear it.

Years ending at Lady-day.	Amount Expended in the Relief and Maintenance of the Poor in England and Wales.	Population (computed) of England and Wales in each year.	Proportion per head of Expenditure to Population.	Excess or Deficiency of the Proportion in relation to the average of the 9 years.	Population, not Paupers, ascertained by deducting the Number Relieved in the Lady-day Quarter of each year from the Population for the year.	Proportion per head of Expenditure to Population, not Paupers	Excess or Deficiency of the Proportion last-mentioned, in relation to the average of 8 years.
	£		£	£		£	£
1838	4,123,604	15,241,700	·270	— ·021	....	....	....
1839	4,406,907	15,461,300	·284	— ·007	14,328,035	·307	— ·018
1840	4,576,965	15,684,000	·291	....	14,484,471	·315	— ·010
1841	4,760,929	15,906,700	·299	+ ·008	14,605,072	·326	+ ·001
1842	4,911,498	16,132,600	·304	+ ·013	14,705,413	·334	+ ·009
1843	5,208,027	16,361,600	·318	+ ·027	14,815,210	·351	+ ·026
1844	4,976,093	16,593,900	·299	+ ·008	15,116,339	·328	+ ·003
1845	5,039,703	16,829,600	·299	— ·008	15,358,630	·328	+ ·003
1846	4,954,204	17,068,500	·290	— ·001	15,737,943	·314	— ·011
		Average....	·291		Average....	·325	

From the materials thus derived from the Poor Law Reports it is to be inferred that the condition of the people of England and Wales generally was not only much depressed at the commencement of the period in view, but was growing gradually worse during the whole of the four years extending from Lady-day 1839 to the same

date in 1843;—that a great and rapid improvement took place in the manufacturing districts in 1843; and was continued down to Lady-day 1846;—that there was, in the agricultural districts, a gradual and continuous depression during the six years extending from Lady-day 1839 to Lady-day 1845; but that the improvement shown in the manufacturing districts after Lady-day 1843 was so far shared by the agricultural districts that, after that period, the annual rate of depression was materially diminished;—and that at length a diminution in the proportion of pauperism to population took place also in the agricultural districts so great as to warrant the inference that the condition of the people in these districts had been very considerably and rapidly improved within the year ending at Lady-day 1846.

Of the condition of the people since Lady-day 1846 it will be observed that these returns afford us no evidence.

It is much to be regretted that the inquiry as to the proportion of pauperism to population during the period in question cannot be extended beyond England and Wales.

The Act of 1838, introducing the Poor Law of this country into Ireland, has not, even yet, been carried so far into operation as to afford the means of ascertaining the proportion referred to for even a single year. The following statement of the number of persons relieved and the amount of the expenditure, in each year since 1840, will, when considered in connexion with the extent to which pauperism is, upon other evidence, known to prevail in Ireland, abundantly prove that but a small fraction of the relief actually administered to destitute persons in that country is brought to view in the accounts of the Poor Law Commissioners.

Years ending Dec. 31st.	Number of Unions in operation.	Expenditure during the year.	Number of Persons relieved during the year.
1840.....	4	£ 37,057	10,910
1841.....	37	110,278	31,108
1842.....	92	281,233	87,604
1843.....	106	244,374	87,898
1844.....	113	271,334	105,358
1845.....	123	316,025	114,205
1846.....	129*	435,001	243,933

\* The whole country is divided into 130 unions, so that only one was excluded from the system in 1846.

As before the passing of the Act, 8 & 9 Vict., c. 83, (in the Session of 1845), there was no compulsory provision for the poor in Scotland, we have, before that time, no official account of their numbers. The Act referred to created a "Board of Supervision for the Relief of the Poor in Scotland," distinct from the Poor Law Commission of England. The First Annual Report of this body was made in August 1846, and was published last year. It embraces

a very full and lucid description of the arrangements for the relief of the poor under the old voluntary system, and of the proceedings of the Board in their amendment, under the law of 1845; and there is appended to the Report a general abstract of a mass of returns made to the Board by the "Inspectors of Poor" throughout Scotland, showing the number of paupers, and the sums expended in the relief and management of the poor, during the two years ending respectively February 1845 and February 1846; and the increase or decrease in the number of paupers, and in the sum expended in their relief, during the latter year. The following statement, however, will show that these returns, even for the short period they cover, are not sufficiently complete in character to warrant their use in the present inquiry; for it can scarcely be supposed that the actual proportion of pauperism to population is, as the figures here given would make it, only about one-fourth of what it is in England.

Years.	Number of Persons on the Roll on 1st February.	Sum Expended in the Relief and Management of the Poor in the year preceeding.
1845.....	63,070	£ 258,814
1846.....	69,342	295,232

If we receive the Reports of the Poor Law Commissioners as evidence of the condition of the poorest, the least provident, and the least fortunate among the people, the returns of the amount of the funds in the Savings Banks may perhaps be received with nearly equal confidence as evidence of the condition of the classes next above these.

Undoubtedly, both these sources of information are to be safely relied upon only under the exercise of much caution. As the number of persons relieved as paupers may have varied in obedience to other influences than those now sought to be developed, as under changes in the law, or in the means or the methods of administering it, so the amount of the funds in Savings Banks may have been, and probably has been, varied by causes wholly apart from those springing immediately from the greater or less prosperity, for the time being, of the people at large. The number of depositors in Savings Banks in the United Kingdom (about 1,100,000) is large enough, and their distribution over nearly every part of the kingdom, among the classes whose condition is now chiefly to be considered, is sufficiently general, to warrant the inference that every cause operating powerfully upon the pecuniary means of any considerable section of the community will have an effect, more or less perceptible, upon the aggregate amount of the funds they hold in deposit in successive years. It is, however, to be borne in mind, in the first place, that both the number of the depositors and the amount of the funds have, during the period now under review, been steadily increasing in continuation of the increase

by which the present system of Savings' Banks has altogether grown up since 1817\*. Before we can safely rely upon any given addition to these funds as evidence of an absolute increase of the pecuniary means of the depositing classes, it is, therefore, obviously necessary to allow for the gradual extension of the use of Savings' Banks, and of the provident habits they may be presumed to serve and strengthen. And, on the other hand, a diminution of the Savings' Bank funds is not necessarily to be referred to a diminution of the means of the depositors. The inducements to keep money in deposit in these Banks may have become less, or those to withhold or to withdraw it greater, than before; or it may even so happen that the two conditions have occurred together. As, for instance, when the rate of interest allowed on deposits in Savings' Banks was reduced in November, 1844; and when, in the year following, speculations in railway shares offered a strong temptation to the withdrawal of money from these Banks by persons dazzled with the prospect of enormous profits.

The Savings' Bank returns have one important advantage over those obtained through the Poor Law Commissioners:—they extend to the whole of the United Kingdom.

The following table is framed to represent the proportion of the total amount of the Savings' Bank funds to the population of the United Kingdom in each year, with the annual variations in relation to the average of the whole period, and also the increase of the proportion in each year, as compared with the one preceding.

Years.	Population of the United Kingdom (computed.)	Aggregate Amount of Savings' Bank Funds, including Sums invested with the Commissioners of the National Debt by Friendly Societies.	Proportion per head on the Population.	Relation of the Annual Proportion to the Average of the 8 years.	Increase of the Proportion in each year, in relation to the one preceding.
		£	£	£ Per ct.	
1839	26,516,000	22,425,812	·841	— ·183 = 17·87	....
1840	26,789,000	24,688,815	·920	— ·104 = 10·15	·079
1841	27,064,000	25,781,368	·952	— ·072 = 7·03	·032
1842	27,342,000	26,768,580	·979	— ·043 = 4·19	·027
1843	27,624,000	28,786,603	1·042	+ ·018 = 1·75	·063
1844	27,909,000	31,725,636	1·120	+ ·096 = 9·37	·078
1845	28,196,000	32,661,924	1·158	+ ·134 = 13·08	·038
1846	28,487,000	33,694,642	1·182	+ ·158 = 15·45	·024
		Average....	1·024		

And the next exhibits the same particulars for England and Wales only.

\* The total number of depositors in 1838 was 703,236, and the amount of the funds 21,393,000*l.* In 1845 the number of depositors was 1,063,418, and the amount of the funds 32,661,000*l.* This shows a rate of increase, for each, about four times as great as that due to the mere increase of population.

Years.	Aggregate Amount of Savings' Bank Funds in England and Wales.	Proportion per head on the Population.	Plus or Minus of the Proportion in relation to the Average of the 8 years.	Increase of the Proportion, in each year, in rela- tion to the year preceding.
	£	£	£	£
1839.....	19,771,541	1·278	— ·163	....
1840.....	20,725,356	1·321	— ·120	·043
1841.....	21,563,878	1·355	— ·086	·034
1842.....	22,312,301	1·383	— ·058	·028
1843.....	23,900,122	1·460	+ ·019	·077
1844.....	25,712,661	1·549	+ ·108	·089
1845.....	26,548,358	1·577	+ ·136	·028
1846.....	27,434,474	1·607	+ ·166	·030
	Average....	1·441		

It will be observed, that the aggregate amount of the funds in Savings' Banks in the United Kingdom, and also in England and Wales separately, increased through the whole term more rapidly than the population. A mere comparison of the proportion of the amount of the funds to the population, therefore, does not afford any very striking confirmation of the variations observed under the operation of the Poor Law; but if we observe *the proportion added to the funds in each year*, as compared with the year preceding, a closer indication is obtained; and here we find evidence of remarkable variations. If, for instance, the pound sterling be divided into 1,000 parts, it appears that there were in the Savings' Banks of the United Kingdom, in 1839, for each member of the population, a proportion amounting to 840 parts. In 1840, there were added 79 parts. In 1841, only 32 parts were added, and in 1842 only 27 parts; but in 1843 there were 63 parts added, and in 1844, 78 parts. Thus, though the funds grew during the whole period, the rate of their growth varied considerably: becoming slower in each succeeding year after 1839, until 1842; when a change took place, and the previous rate of growth was gradually resumed. After 1844 the rate of growth again declined; but here it is to be remembered, that the rate of interest allowed in Savings' Banks was reduced by Parliament from the 20th of November, 1844, the maximum rate being then fixed at 2*l.* per cent. per diem, or 3*s.* 0*s.* 10*d.* per cent. per annum; and that about the same time, not only was there a general revival of trade, producing many openings for the profitable investment of small amounts of capital, but also the railway speculations began to excite general attention: each of which circumstances may reasonably be supposed to have caused the withdrawal, or the withholding, of considerable sums from Savings' Banks during the year or two following.

The tables given in the following pages, in which this branch of the investigation is pursued in detail, may perhaps be safely received as confirming the general inference to be deduced from the Poor Law Returns, that the condition of the people underwent a gradually increasing depression during the four years ending in the spring of 1843. To any greater extent I confess I am not inclined to rely upon them for the present purpose.

To represent the manufacturing districts, I am compelled to take the county of Lancaster alone, as there is no separate return for the West, as distinguished from the other Ridings of York. It is also to be observed, that the amount invested directly with the Commissioners for the reduction of the National Debt, instead of through the banks, not having relation to the division of counties, is necessarily excluded from the inquiry, as it concerns particular districts. This amount steadily increased from 1,217,765*l.* in 1840 to 1,806,916*l.* in 1845.

I have also deemed it proper to carry the computation for Lancashire one year farther back, in order to bring into view a remarkable diminution of the funds in that county in the year ending the 20th of November, 1839. This would appear to mark the first effect of the high prices of food, and the checked and disturbed state of trade in that county, in 1838; but whatever the cause of the variation, its exhibition seems to be necessary to the practical completeness of the table, as discovering a material diminution of the funds immediately prior to the commencement of the fluctuations more particularly to be regarded.

It may also be necessary to observe, that in dealing with the funds of separate counties, I include in one sum those ascribed in the accounts to "Individual Depositors," "to Charitable Institutions," and to "Friendly Societies," on the ground that all are likely to be increased or diminished by causes operating generally on the prosperity of the people.

MANUFACTURING DISTRICTS.

Years.	Aggregate of Savings' Bank Funds for the County of Lancaster.	Proportion per head on Population.	Increase or Decrease of the Proportion in relation to the Average of the 9 years.	Increase of the Proportion in each year, as compared with the year preceding.	The like Decrease.
	£	£	£	£	£
1838....	1,553,337	·998	— ·090	....	....
1839....	1,525,773	·958	— ·130	....	·040
1840....	1,607,951	·986	— ·102	·028	....
1841....	1,678,241	1·006	— ·082	·020	....
1842....	1,688,548	·989	— ·099	....	·017
1843....	1,898,837	1·087	— ·001	·098	....
1844....	2,150,766	1·204	+ ·116	·117	....
1845....	2,315,170	1·267	+ ·179	·063	....
1846....	2,440,849	1·305	+ ·217	·038	....
	Average....	1·088			

Here the decrease in 1839, the small increase in 1840 and 1841, and the second decrease in 1842, agree generally with all the more prominent features of the preceding tables. The heaviest drawback to the growth of the funds (after 1839,) seems to have occurred in the year ending the 20th of November, 1842. A continuous increase began in 1843, and went on with greater rapidity in 1844;—and this agrees to a remarkable extent with the results previously

obtained, as to the diminished proportion of pauperism at the same period.

The following is a similar table for the agricultural districts, comprising the returns for the nine counties before mentioned.

AGRICULTURAL DISTRICTS.

Years.	Aggregate of Savings' Bank Funds for the nine selected Counties.	Proportion per head on Population.	Increase or Decrease, per head, in relation to the Average of the 8 years.	Increase of the Proportion in each year, as compared with the year preceding.	The like Decrease.
	£	£	£	£	£
1839....	3,351,801	1·417	— ·196	....	....
1840....	3,518,367	1·474	— ·139	·057	....
1841....	3,671,456	1·523	— ·090	·049	....
1842....	3,829,597	1·574	— ·039	·051	....
1843....	4,036,687	1·642	+ ·029	·068	....
1844....	4,259,435	1·718	+ ·105	·076	....
1845....	4,407,965	1·761	+ ·148	·043	....
1846....	4,541,635	1·797	+ ·184	·036	....
	Average....	1·613			

A correct appreciation of this table, as well as of those preceding it, will probably be aided by consideration of the fact that, in most districts, and in the agricultural districts in particular, the depositors in savings' banks are principally either persons rather in the middle than in the lower ranks of life, or servants and others in the employment of families whose domestic arrangements are not immediately or extensively affected by such a degree of general depression, even as that which appears to have prevailed between 1839 and 1843. Hence, probably, both the higher proportion (in the agricultural districts,) of the funds to the population, and the comparatively steady growth of the aggregate amount of the funds from year to year. Though, however, the fluctuations observed lie within much narrower limits in the agricultural than in the manufacturing districts, it will be observed that they mark the occurrence of changes of a similar character at about the same periods. If we take the five years, 1840 to 1844 inclusive, we find the years of least addition to the funds were 1841 and 1842; and that 1843 and 1844 show a considerable increase, as compared with any of the previous years.

Within the last few days (15th Feb., 1848,) there has been published a return to an order of the House of Commons, containing a full abstract of the accounts of the "Manchester and Salford" Savings' Bank, in each year from 1818 to 1847 inclusive. Availing myself of the information thus afforded, I have computed the population of Manchester and Salford and the suburbs, (using, throughout, the local limits of 1831,) by the method before described, and comparing it with the annual variations of the Savings' Bank funds, have stated the results in the following table.

*Manchester and Salford Bank for Savings, in Relation to the Population of Manchester, Salford, and the Suburbs.*

Annual Account made up to the 20th Nov.	Computed Population.	Amount standing to the credit of Depositors.	Proportion per head on the Population.	Relation of the Annual Proportion to the Average of the 10 years.	Increase or Decrease of the Proportion per head in each year in relation to the one next preceding.
		£	£	£ Per ct.	£
1838 ....	269,400	331,759	1·231	— ·254 = 17·10	....
1839 ....	278,300	331,729	1·191	— ·294 = 19·79	— ·040
1840 ....	287,400	366,423	1·274	— ·211 = 14·20	+ ·083
1841 ....	296,800	397,592	1·339	— ·146 = 9·83	+ ·065
1842 ....	306,500	416,283	1·357	— ·138 = 9·29	+ ·018
1843 ....	316,700	488,824	1·543	+ ·058 = 3·90	+ ·186
1844 ....	327,100	568,313	1·737	+ ·252 = 16·96	+ ·294
1845 ....	337,800	599,186	1·773	+ ·288 = 19·39	+ ·036
1846 ....	349,000	629,381	1·803	+ ·318 = 21·41	+ ·030
1847 ....	360,500	580,915	1·611	+ ·126 = 8·44	— ·192
		Average	1·485		

It will be observed, that the variations in the proportion of the funds to the population are much wider than those shown in any of the tables previously given. These variations may be compared thus:—

	Proportions of Savings' Bank Funds to Population during the 8 years, 1839-46.		
	Highest.	Lowest.	Variation.
	£	£	£
United Kingdom.....	1·182	·841	·341
England and Wales.....	1·607	1·278	·329
„ Manufacturing Districts	1·305	·958	·347
„ Agricultural „	1·797	1·417	·380
Manchester and Salford .....	1·803	1·191	·612

Confining our view to the eight years 1839-46, we find that the lowest proportion occurred in the first year, and the highest in the last;—that when groups of districts are compared, the agricultural exhibit the highest proportion throughout;—and that in the United Kingdom, in England and Wales, and in the manufacturing and agricultural districts of England and Wales respectively, the variation between 1839 and 1846 was nearly the same, showing an increase of about 7s. per head on the general population;—but that in Manchester and Salford the variation during the whole period was nearly twice as great as is shown in any of the instances previously examined. And if the table relating to the latter be regarded separately, it will be observed to afford evidence of fluctuations, both in the amount of the funds and in the rate of their growth, of a very remarkable character. In particular I would draw attention to the last column, and to the

absolute decrease of the proportion of the funds to the population in 1839 and in 1847, as compared with the years immediately preceding.

Among the most valuable of the statistical records which have recently been made available in such investigations as the present, there is another,—the registry of births, deaths, and marriages,—which, though indicating changes in the condition of society, of a description differing widely from those already considered, may reasonably be expected to correct or confirm, in some degree, conclusions based upon the fluctuating proportions of pauperism and savings' bank funds to population.

I have made no attempt to use the records of births or of deaths. It is extremely probable that, were it possible to eliminate all that is due to every other cause, we should find the varying numbers of both births and deaths, especially over periods longer than that we are now dealing with, strikingly indicative of corresponding changes in the pecuniary condition of the people; but in the present state of the materials upon which any such investigation must be based, I have deemed it hopeless to attempt the needful preliminary operation. In the registry of marriages, however, the disturbing influences are comparatively few. Each such event records an act of the most deliberate kind, to which two grown persons at least are consenting parties, and also an act which, in a great majority of cases, is liable to be hastened or postponed by the favourable or unfavourable condition of the pecuniary affairs of those immediately concerned. I have, therefore, extracted from the last Annual Report of the Registrar-General the figures necessary for the formation of the following table, which exhibits the proportionate number of marriages annually to every 100,000 males living, first in England and Wales, and then in each of the groups of districts before selected to represent the manufacturing and agricultural portions of the kingdom.

*Marriages annually to 100,000 Males living.*

	1839.	1840.	1841.	1842.	1843.	1844.
In England and Wales .....	1,625	1,597	1,574	1,506	1,549	1,633
In the selected Manufac- turing districts .....	1,783	1,702	1,678	1,545	1,721	1,914
In the selected Agricultural districts .....	1,464	1,448	1,443	1,400	1,385	1,419

Or, to make the fluctuations indicated by these numbers more distinctly apparent, they may be stated thus:

Comparing	In England and Wales.		In the Selected Manufacturing Districts.		In the Selected Agricultural Districts.	
	Increase.	Decrease.	Increase.	Decrease.	Increase.	Decrease.
1839 with 1840 .....	....	28	....	81	....	16
1840 with 1841 .....	....	23	....	24	....	5
1841 with 1842 .....	....	68	....	133	....	43
1842 with 1843 .....	43	....	176	....	....	15
1843 with 1844 .....	84	....	193	....	34	....

If the last table be compared with that previously given, showing the fluctuations of the amount of pauperism in the corresponding years (at page 108), a very striking coincidence will be observed throughout. Indeed, it is not easy to conceive indications of the same general changes in the condition of the people, drawn from sources so widely separated, more strongly and directly confirmatory of each other.

As the only other test, of a character sufficiently general to be relied upon for the present purpose, resting upon official records, I may refer to the Reports of the Emigration Commissioners. It appears that the total number of persons who emigrated from ports in the United Kingdom, under their supervision, was, in each of the years under review, as follows:—

In 1839 .....	62,207	In 1843 .....	57,212
„ 1840 .....	90,743	„ 1844 .....	70,686
„ 1841 .....	118,592	„ 1845 .....	93,501
„ 1842 .....	128,344	„ 1846 .....	129,851
Average, 93,894.			

Here the gradual increase of the number of emigrants during the first four years seems to accord with all the results previously obtained; so also does the sudden decrease in 1843; but the gradual increase during the next three years, with the large number in 1846, seem to require further explanation. The decrease in 1843, independently of its agreement with previous results, is a repetition of what the records of previous years proves to be common. The number of emigrants seems invariably to fall off considerably in the year after it reaches any extraordinary height. The number in 1844 is considerably below the average of the eight years; and even that of 1845 scarcely reaches the average. And in both the last-mentioned years some allowance is to be made for the effect of the potato disease, particularly in Ireland, whence, chiefly, the emigration of each of these years is stated to have taken place.

There is also another class of returns of a general description, and which, as to the commercial classes, are in some degree analogous to those of the Poor Law. I mean the Returns of the number of Bankrupts, annually and monthly, and their occupations. I have examined these with the desire to avail myself of their aid; but though I find it would be easy to derive from them an apparent confirmation of the inferences deduced from other materials, I also find that the operation of this test has been so much interfered with, in the first place by changes in the law, and in the next by the prevalence of the practice of avoiding bankruptcy by private arrangements with creditors, that whatever were the results of its application, I should feel compelled to reject them for want of confidence in their origin.

From the sources of information thus appealed to we may gather indications of a gradual decline in the prosperity of the people of the United Kingdom during the four years extending from the spring of 1839 to the spring of 1843; and of a gradual elevation of their condition from the last-mentioned date to about the autumn of 1846, beyond which period the materials available do not enable us to

extend our view; except in the instance of the return from the Manchester and Salford Savings' Bank; and there we find evidence strongly confirmatory of the reports current during the last eighteen months, of severe depression in the principal manufacturing districts.

The remarkable difference between the variations observed in the condition of the manufacturing and the agricultural districts of England and Wales would seem to indicate the operation, during this period, either of different influences in different parts of the kingdom, or of the same (or similar) influences upon social conditions differing so far as to cause a wide divergence in the apparent results.

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I now pass to the second division of the subject, with the purpose of developing "the connexion (if any) between the changes observed in the condition of the people during the eight years, 1839-47, and the variations occurring during the same period in the prices of the most necessary articles of food."

And here a word or two may be requisite to define more precisely the scope of my present purpose. I should not have undertaken the labour of preparing this paper had I not conceived the hope of tracing, by a strictly statistical method, some of the principal causes of the changes already described to concurrent fluctuations in the prices of food. Aware, however, of the tendency of the exclusive contemplation of one particular set of causes to warp the judgment in its estimate of their comparative influence, and not hoping entirely to escape this source of error, I desire to place the results of my labours in such a form as will best enable those who may think fit to examine, to use, or to add to them, to test the validity of every inference I may venture to draw. I have deemed it proper, therefore, to keep this second division of the paper so far distinct from the first that each may have a significance of its own, independently of any it may derive from its connexion with the other.

The most necessary articles of food in the United Kingdom, those the consumption of which is most general among all classes of the people, and which all but the very poorest can least dispense with, are, fortunately, those, also, the prices of which are to be ascertained most readily and accurately. I allude, of course, to the six descriptions of grain and pulse (wheat, barley, oats, rye, beans, and peas,) of which the average prices, weekly and annually, in this country, have now been recorded regularly for a long series of years. For about the first half of the period under review, these averages were ascertained by taking an account, weekly, of every sale made in each of 150 of the principal corn-markets in England. About June 1842 the number of markets thus inspected was extended to 290. In other respects the method of taking the average has, I believe, remained unaltered during the period to be considered. The method of computation is so far perfect that, if accurately worked out, it may be held to give the true average weekly price of all the sales actually inspected. And these would appear to include, as to wheat, about one-third of the entire quantity grown and consumed in England and Wales. If it be liable to any objection it is in reference to the *annual* average, which is made up simply from the averages of the fifty-two

weeks in each year, from January to December, without any reference to the *quantities* sold under each of the weekly averages. In most years the inequalities of the weekly sales, at different prices, so nearly correct each other, that a strict reference to them would probably not alter the annual result to any material extent. But the method being defective, the accuracy of the average, if it be accurate, is merely accidental. And it so happens that, in the last year (1847), the sales having been very unequally distributed, the usual method of computation gives an average varying materially from the true one: the former giving 69*s.* 9*d.*, and the latter only 68*s.*, as the annual average price. It might also be worthy of consideration whether, if the needful labour for obtaining an accurate annual average of the prices of British grain is to be undertaken officially, it might not be better applied (possibly in connection with a system of agricultural statistics) to a period more nearly coinciding with that in which each crop of grain is grown and consumed, or to the *harvest* year, rather than to the astronomical year. It is true that the former, if fixed by law, might frequently, under the variations of the seasons, vary a week or two from an exact coincidence with the gathering of the crops; but the latter involves the constant anomaly of including some thirty-four or thirty-five weeks covered by one harvest, and seventeen or eighteen covered by the next.

In the first of the two following tables I have used the annual average prices of grain, as obtained officially, for the astronomical years, and, in the second, the annual averages of the fifty-two weeks following the first week in September\*. In both cases, the quantities sold at each weekly average price are disregarded. And the distribution of the sales of home-grown wheat having been still more irregular during the year extending from September 1846 to September 1847, than in the year from January to December 1847, the deviation of the average stated from that which would be obtained by a strict regard to the quantities sold at different prices is still greater in the last line of the second table than in that of the first. Thus, as has been stated, if the quantity sold in each week be taken into account, the official average price of wheat for the year 1847 will be reduced from 69*s.* 9*d.* to 68*s.* And in the harvest year, if regard be had only to the unequal distribution of the sales over the *quarters* of the year, so much greater were the inequalities that the annual average will be reduced from 68*s.* 5*d.* to about 64*s.* 6*d.* It will be remembered that these averages include only grain of home growth. The quantities sold are, however, sold in competition with supplies of foreign grain; and if these were taken into the account, they would render the quantities sold in each week much more nearly alike. Though, therefore, they are defective for the purpose of ascertaining the price obtained by the British grower for his grain, they are perhaps

\* There may be a difference of opinion as to the period at which the harvest-year should be deemed to commence, when the computation extends over a series of years. In the last volume of Mr. Tooke's "*History of Prices*" the harvest-year is assumed to run from the first week in August as to the effect of each harvest upon *prices*, and from the first week in September as to the actual supply of grain. I have here taken the beginning of September instead of the beginning of August, because I am inclined to think that either would very nearly answer the purpose; and the two computations may afford some ground for the discussion of their relative merits.

not far from accurate as indications of the price paid by the people for all the grain consumed. And as it is in this point of view, chiefly, that I would now regard them, I have not disturbed the official average even for the last year; and in taking the averages of the harvest-years have adhered to the same method\*.

*Average Prices of Grain—Official—in Astronomical Years.*

Yrs.	Wheat.	Excess or Deficiency of the Annual Average Price of Wheat, as compared with the Average of the whole Period.	Barley.	Oats.	Rye.	Beans	Peas.	Collective Average of the Prices of the five before-named descriptions of Grain, besides Wheat.	Excess or Deficiency of the Annual collective Average of such Prices, as compared with the Average of the whole Period.
	Per Qr. £	Per Qr. £	Pr Qr £	Pr Qr £	Pr Qr £	Pr Qr £	Pr Qr £	Per Qr. £	Per Qr. £
1839	3.533	+ .561	1.975	1.355	2.1	2.062	2.058	1.918	+ .200
1840	3.316	+ .344	1.821	1.283	1.85	2.171	2.121	1.849	+ .131
1841	3.216	+ .244	1.641	1.121	1.837	1.991	2.017	1.721	+ .003
1842	2.862	— .110	1.375	.962	1.65	1.645	1.621	1.450	— .268
1843	2.504	— .463	1.475	.916	1.529	1.534	1.458	1.392	— .326
1844	2.562	— .410	1.683	1.029	1.695	1.671	1.721	1.539	— .159
1845	2.541	— .431	1.583	1.125	1.625	1.945	1.933	1.642	— .076
1846	2.733	— .239	1.633	1.183	1.75	1.95	1.95	1.693	— .025
1847	3.467	+ .515	2.208	1.433	2.450	2.525	2.571	2.237	+ .519
	Av. 2.972		1.710	1.160	1.831	1.946	1.939	Avgc. 1.713	

*Average Prices of Grain—determined by the Official method—in the Harvest-years, beginning with the first week in September.*

Years.	Wheat.	Excess or Deficiency of the Annual Average Price of Wheat, as compared with the Average of the whole Period.	Barley.	Oats.	Rye.	Beans	Peas.	Collective Average of the Prices of the five before-named descriptions of Grain, besides Wheat.	Excess or Deficiency of the Annual collective Average of such Prices, as compared with the Average of the whole Period.
	Per Qr. £	Per Qr. £	Pr Qr £	Pr Qr £	Pr Qr £	Pr Qr £	Pr Qr £	Per Qr. £	Per Qr. £
1839-40	3.416	+ .496	1.962	1.316	1.883	2.183	2.137	1.896	+ .194
1840-41	3.179	+ .259	1.658	1.135	1.771	2.05	2.046	1.730	+ .028
1841-42	3.116	+ .196	1.475	1.037	1.821	1.771	1.654	1.591	— .111
1842-43	2.529	— .391	1.412	.912	1.541	1.491	1.575	1.386	— .316
1843-44	2.633	— .287	1.6	.987	1.616	1.629	1.646	1.495	— .207
1844-45	2.366	— .554	1.629	1.071	1.641	1.866	1.8	1.601	— .101
1845-46	2.7	— .220	1.508	1.150	1.675	1.95	1.866	1.629	— .073
1846-47	3.421	+ .501	2.368	1.487	2.541	2.533	2.6	2.293	+ .591
	Av. 2.920		1.631	1.137	1.811	1.929	1.940	Avgc. 1.702	

\* The use of these averages, with reference to the whole of the United Kingdom, though not strictly correct, is in accordance with the use made of them under the Corn Laws, to serve which, only, they were instituted: the duties being levied by the scale they govern in every part of the United Kingdom. Nor does there appear to be, in fact, any strong practical objection to their being regarded as the prices of the United Kingdom as much as of England and Wales.

It will be observed that in the latter table—that which may be regarded as marking most clearly the fluctuations of price connected with the varying yield of the grain-crops in each year—both wheat and the five other descriptions of grain taken collectively were unusually high in price at the beginning of the period in view, and fell gradually till the harvest year 1842-3, when both reached a minimum. Wheat rose in 1843-4, but in 1844-5 fell again, even lower than the year but one before, while after 1842-3 all the other descriptions of grain rose in price, somewhat steadily, till the harvest of 1846; and, finally, in the harvest year 1846-7 rose, together with wheat, to an extraordinary height. In particular it will be observed, that the price of wheat was, in each year, down to the commencement of the harvest year 1842-3, considerably above the average of the whole period, even elevated as that average is by the high prices of the last year.

A mere statement of the average prices of grain during any given series of years affords, however, a very inadequate impression of the effect of the variations exhibited upon the condition of the people, unless accompanied by a statement of the quantities of *foreign grain* imported and consumed at these prices. I have, therefore, collected into the next table, a statement of the quantities of each of the six descriptions of grain before mentioned, imported into the United Kingdom and entered for consumption, during each of the ten years ending the 5th of January, 1847. The statement is carried back a year or two in order the better to mark the unusual extent of the importations in the earlier part of the period now under consideration. The additional column for maize is rendered necessary by the newly acquired importance of this grain in the importations of the last two years.

*Grain entered for home consumption.*

Years.	Wheat and Wheat Flour.	Barley.	Oats.	Rye.	Beans.	Peas.	Maize.
	Qrs.	Qrs.	Qrs.	Qrs.	Qrs.	Qrs.	Qrs.
1837	244,272	332,276	19,555	47,184	109,076	87,615	....
1838	1,848,475	8,192	11,004	2,517	54,240	11,618	....
1839	2,711,273	594,301	855,448	152,582	123,597	170,270	....
1840	2,401,436	619,801	504,945	1,298	129,517	153,489	....
1841	2,647,808	222,837	20,416	518	267,697	132,857	....
1842	2,989,708	49,520	280,600	28,502	42,737	80,000	....
1843	990,523	223,209	40,820	2,718	45,520	45,014	....
1844	1,025,887	1,024,322	259,135	28,716	225,260	122,548	38,711
1845	315,015	397,655	582,909	15	197,030	79,605	42,285
1846	2,963,000	400,443	772,554	1,636	209,874	181,800	720,580
1847*	4,458,500	772,349	1,706,780	68,817	443,719	157,245	3,614,637

\* The quantities for 1847 are those *imported*—no distinction as to entry for consumption appearing in the official accounts while the ports are open.

And in the two tables next following will be found computed the cost of the quantities of the three principal descriptions of grain (wheat, barley, and oats,) thus entered for consumption in each year, at the official average price of the year, with the annual proportion per head on the population of the aggregate cost.

*Cost of the Grain Imported in the following Years, at the average Price of the (astronomical) Year in England and Wales.*

	1837.	1838.	1839.	1840.	1841.
	£	£	£	£	£
Wheat ....	681,922	5,968,601	9,579,730	7,964,761	8,517,115
Barley ....	503,951	12,897	1,173,913	1,128,553	365,822
Oats .....	22,568	12,144	1,108,146	648,012	22,900
	1,208,441	5,993,702	11,861,789	9,741,326	8,905,837

	1842.	1843.	1844.	1845.	1846.	1847.
	£	£	£	£	£	£
Wheat ....	8,557,628	2,480,807	2,628,834	800,662	8,098,866	15,549,000
Barley .....	68,090	329,233	1,724,275	631,618	654,056	1,705,600
Oats .....	270,200	37,410	274,250	655,772	914,188	2,446,384
	8,895,928	2,847,450	4,627,359	2,088,052	9,667,110	19,700,984
Add the cost of Maize in 1846-7 (before which period it was imported only in small quantities [say] at 40s. per quarter .....					1,441,000	7,229,724
					11,108,110	26,930,258

Years.	Total Cost of the Wheat, Barley, and Oats, entered for consumption at the Average Prices of the Year.	Proportion per head on Population of such cost.	Excess or Deficiency of proportion, in relation to the Average of the 11 years.
	£	£	£
1837.....	1,208,441	·046	- ·263
1838.....	5,993,702	·228	- ·081
1839.....	11,861,789	·447	+ ·138
1840.....	9,741,326	·363	+ ·054
1841.....	8,905,837	·329	+ ·020
1842.....	8,895,928	·325	+ ·016
1843.....	2,847,450	·103	- ·206
1844.....	4,627,359	·165	- ·144
1845.....	2,088,052	·074	- ·235
1846.....	11,108,110*	·389	+ ·080
1847.....	26,930,258*	·935	+ ·626
		Av. ·309	

\* It will be noticed that these sums so far vary from the description at the head of the column, that they include the cost of the *maize* entered for consumption in 1846-7.

If attention be given particularly to the eight years now under consideration, it will be observed that the apparent outlay for foreign grain, to make good the deficiency of our own crops, was by much the heaviest in the four consecutive years from 1839 to 1842 inclusive. We have here, very distinctly marked, the effect of the four deficient harvests of 1838-9-40 and 41.

The apparent *average* amount expended annually in the purchase of foreign wheat, barley, and oats only, in the four years, (1839-42,) was 9,851,000*l*. In the three years next following, the amount similarly expended was reduced to an average considerably less than one-third of this sum, having been only 3,187,000*l*. Again, the amount of the burden from this source, if distributed equally over the computed population of each year, gives an average tax per head during each of the four years, 1839-42, of £366, (about 7*s*. 4*d*.); or upon each family of five persons, rich and poor, throughout the kingdom, about 36*s*. 8*d*. per annum. In the three years next following (1843-45,) the burden, measured in the same way, was reduced to the annual average of about £114 (about 2*s*. 3½*d*.) per head, or not quite 11*s*. 6*d*. per annum on each family.

It would thus appear, that during the four years 1839-42, there was, as an immediate result of the deficient home supply of wheat, barley, and oats only, a deduction made from the aggregate income of the population (to be paid to foreigners, to make good in some degree the deficiency of the home supply,) of nearly 10,000,000*l*. sterling per annum, and that in the three years, 1843-45, the deduction made on the same score but little exceeded 3,000,000*l*. per annum.

The effect of the enormous expenditure of the last year falls, in great part, beyond the period in view.

The results in relation to the aggregate profit of our *foreign trade* may be estimated from the following statement of the total (declared) value of the British and Irish produce exported from the United Kingdom in each year, as compared with the concurrent outlay upon foreign grain of the descriptions referred to, as estimated above. For the purpose of bringing the computation to a more practical issue, I have assumed the average amount of profit returned, one year with another, upon British produce exported, to be 10 per cent. The precise accuracy of this estimate is not, it will be observed, of much importance in relation to the present purpose, which is not so much to ascertain the actual proportion of our annual outlay on foreign grain to the profits of our foreign trade, as to exhibit the importance of large variations in the former, in relation to any reasonable estimate of the amount of the latter.

Years.	Declared Value of British and Irish Produce Exported.	Estimated profit thereon at 10 per cent.	Cost of Foreign and Colonial Wheat, Barley, and Oats, entered for consumption in each year, estimated as before described.
	£	£	£
1837.....	42,070,744	4,207,000	1,208,441
1838.....	50,060,970	5,006,000	5,993,702
1839.....	53,233,580	5,323,000	11,861,789
1840.....	51,406,430	5,140,000	9,741,326
1841.....	51,634,623	5,163,000	8,905,837
1842.....	47,381,023	4,738,000	8,895,928
1843.....	52,279,709	5,227,000	2,847,450
1844.....	58,854,292	5,885,000	4,627,359
1845.....	60,111,081	6,011,000	2,088,052
1846.....	57,786,000	5,778,000	11,108,110

Thus, assuming that the average rate of profit is correctly taken, the total profit upon exports of British produce during the four years, 1839-42, was about 20,364,000*l.*; while the apparent cost of the foreign wheat, barley, and oats, entered for consumption during the same four years, was 39,404,000*l.*: showing an excess in the outlay upon grain of nearly 19,000,000*l.* sterling. But, in the three years, 1843-45, the result of the comparison is reversed:—the profits upon British exports having apparently been in those years 17,123,000*l.*; while the cost of the foreign grain, of the same descriptions, consumed in this country, was only 9,562,000*l.*: showing an excess of profits of about 7,560,000*l.* I deem it proper, however, again to observe that this comparison is introduced only in the character of an illustration. Both the amounts compared are estimated, and the method and grounds of the estimate are, in each case, to be taken carefully into account, before the result can be safely applied to any practical purpose.

If we regard the probable effect of the prices of grain, as already stated, upon the *home trade*, the apparent results will be found very similar. Attempts have been made, at various times, to estimate the actual quantity of each of the principal descriptions of grain annually consumed in this country; and some of these rest upon what may fairly be deemed high authority. I desired, for the sake of rendering the present paper more complete upon a point so important in reference to its principal purpose, to avail myself of the aid afforded by these estimates; but I find them to rest upon data confessedly so imperfect, that I think it better, in the present stage of the investigation, to exclude the element of quantity, and rest upon the variations of price, so much better ascertained, and already stated. Upon this point, therefore, I shall only refer to the variations exhibited in the tables given on p. 121 ante. If these be compared with the results, previously stated, of the analysis of the returns of pauperism, savings' bank funds, marriages, &c., it will be observed that the years of high prices were also the years in which pauperism was increasing, and savings' bank funds decreasing, (in their rate of accumulation)—marriages diminished in number, and the number of emigrants augmented. The period of marked relief from the depression of 1839-40-41-42, which has already been fixed, with some degree of certainty, at the spring of 1843, will be found to follow immediately upon the remarkable fall in the price of corn brought by the harvest of 1842, while the very high prices prevailing from the time at which the ascertained failure of the potato crop of 1846 brought an enormously increased demand to bear upon the supply from the grain harvest of that year, will be found to coincide as nearly with the period at which the general depression now prevailing began to be substituted for the state of prosperity which is shown to have prevailed from the summer of 1843 down to the autumn of 1846.

The ordinary descriptions of grain and pulse are not, however, the only articles entering largely into the food of the people the prices of which varied considerably during the period in view. As those most extensively used, and therefore most important to the present purpose, I have selected for examination the prices of *beef, mutton, tea, sugar, and tobacco.*

In dealing with these we can derive no aid from official computa-

tions, except as to sugar; the average prices of British Colonial sugar (unrefined) in the London market having, for a long period, been computed weekly by an officer of the Grocers' Company, and published in the London Gazette. It is a question of some moment, as regards the bearing of the results upon the present inquiry, how the average annual prices of the four remaining articles may be most correctly ascertained. As to beef and mutton I have, for all but the last two years, relied upon the authority of accounts made up annually at the Board of Trade, from monthly returns of the prices of meat in the London markets. The rest are made up from the usual weekly prices current. The prices of tea and tobacco I have obtained by taking the current price of the most extensively used description of each, in bond, in London, at twelve equidistant periods in each year, and making from these the annual averages.

It may be objected that these are all London prices, and therefore not applicable to the whole kingdom. I think this objection, if examined, will not be found material. At to sugar, tea, and tobacco, the whole supply of which is from abroad\*, London is so far pre-eminent as a port of entry, that the prices in bond there may be regarded as the prices of the whole kingdom, freed from those variations which are dependent upon local influences, and therefore the only fit basis for a computation applicable to the entire community. And as to beef and mutton, internal productions, it seems obvious that the prices of the largest markets, which draw their supplies from every part of the kingdom, and minister directly to the consumption of a proportion not less than one-fifteenth of the entire population, no other markets approaching to a competition with them in either respect, may be safely received, if not as perfect, yet as the best available indications of the prevailing prices of the whole kingdom.

In the following table the average annual prices of these five articles are stated together. The prices of beef and mutton are those of meat of medium quality, known as "second class," per stone of 8 lbs. to sink the offal.

Years.	Tea. (Congou)	Sugar. (Muscovado.)	Tobacco. (Virginia.)	Beef.		Mutton.	
	Per lb. <i>s. d.</i>	Per cwt. <i>s. d.</i>	Per lb. <i>s. d.</i>	Per stone. <i>s. d.</i>		Per stone. <i>s. d.</i>	
1840...	2 6	48 8	6 $\frac{1}{4}$	3 6		3 10	
1841....	2 4	38 3	5 $\frac{1}{2}$	3 9		3 10	
1842....	2 2	37 2 $\frac{1}{2}$	4	3 7		3 10	
1843....	1 7 $\frac{1}{2}$	33 11 $\frac{1}{2}$	4	3 2 $\frac{1}{2}$		3 5	
1844 ...	1 7 $\frac{3}{4}$	33 5	3 $\frac{1}{2}$	3 1		3 6	
1845....	1 8	32 9	3 $\frac{1}{2}$	3 5		3 10	
1846....	1 5	35 1	4	3 2		4 2	
1847 ...	1 4	28 9	4	3 11 $\frac{1}{2}$		4 7 $\frac{1}{2}$	

It is remarkable that the variations of price here exhibited agree nearly with those of the annual prices of grain.

\* The small quantity of beet-root sugar produced in this country does not affect the point at issue.

The first three years (1840 to 1842 inclusive,) were years of high prices. The next two (1843-4,) were years of low prices. And in the last three years (1845-47,) the low range of prices appears to have continued, excepting as to beef and mutton. While bread and meat, articles of home produce, fell in price from 1840 down to 1844-5, and thenceforward rose,—tea, sugar, and tobacco, articles of foreign produce, appear to have fallen in price, with little variation, through the whole period.

If, however, we take the last table in conjunction with those showing the annual variations of the prices of grain, it becomes apparent, on a general view, that the years of cheapest food were 1843-4-5, and that the prices of these years were, on the whole, *very considerably* lower than those of the years preceding or following.

In particular, the coincidence of date between the reduction of the prices of *all* the articles referred to in 1843, with the indications of a rapid improvement during that year in the apparent condition of the people is very striking. Indeed, so obvious and remarkable is the coincidence of the return of low prices of food with the return of general prosperity, and the renewal of depression when prices again rose, that the tables will upon this point be best left to speak for themselves.

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Having examined and compared the apparent variations in the condition of the bulk of the community, and in the prices of the principal articles of subsistence, and finding that they coincide sufficiently to support the inference that they were closely connected in the relation of cause and effect, it appears very desirable to ascertain, if possible, how far the quantities of these articles consumed, and the amount expended upon them, in proportion to the population, varied during the same years. Here, however, it is to be feared that the only statistical statements we possess, upon which much reliance can be placed, are insufficient to conduct us to a safe and satisfactory conclusion. Tea and sugar are the only articles among those already mentioned as to which we have any accounts, supposed to approximate accuracy, of the quantities annually consumed; no accounts being taken of either the production or consumption of grain or meat, and the extent to which tobacco is known or supposed to be smuggled rendering the official accounts of the quantity entered for consumption unfit to be relied upon as indications of the quantity actually consumed. But in addition to tea and sugar there are *spirits* (British and foreign) and *malt*, which are consumed almost, if not quite, as extensively; and of the quantities of these (particularly the latter) produced, and charged with duty for consumption, we have statements believed to be tolerably accurate.

I have taken no account of spirits or malt in relation to their *prices*; and for this reason:—the home production of spirits and beer (for which alone malt is prepared,) is nearly confined to a very few hands, and the price of both to the consumers is remarkably steady\*. The

\* Last year, at the beginning of January, a rise of 5s. per barrel was made in the price of beer in London, consequent upon an enormous rise in the price of barley; but no such change had occurred for upwards of seventeen years previously; and, on the opening of the ports to foreign corn, about five weeks afterwards, the old prices were at once resumed.

business of distilling in particular, is, partly from the large capital it requires and partly from the restrictions imposed upon it in protection of the Excise Duty, retained in the hands of a very small number of firms. The price of British spirits is thence much regulated by agreement among the producers; and being thus withdrawn from the ordinary influences of an open market, exhibits (as regards the consumer,) very few of those variations the examination of which might have aided the present purpose.

In the tables next following, I have endeavoured to develop the annual variations of the quantities of tea, sugar, malt, and spirits consumed, in relation to the population—and also the average expenditure per head on each of the three first mentioned—taking for the cost to the consumers, as to tea and sugar respectively, the value, at the average price in bond, of the whole quantity consumed, added to the amount received by the government for duty, and as to malt the average cost of the barley added to the amount of the duty. This does not give, in either case, the whole cost to the consumer; but the part omitted, being made up of commissions, cost of carriage, &c., and trading profit, would, for each locality, bear a nearly equal proportion to the sum thus taken to represent the whole. The amount derived by the revenue from tea, sugar, spirits, and malt, respectively, in 1847, has not yet (21st Feb., 1848,) been published.

*An Account of the Quantity of TEA consumed annually per head—and also of the annual Expenditure on Tea per head—with the annual Variations of each, in relation to the Averages of the whole Period of Eight Years—[1839-1846,]*

Years.	Population of the United Kingdom, by computation.	Quantity of Tea entered for Home consumption.	Average Price per lb. in Bond.	Annual consumption per head, in pounds.	Excess or Deficiency of Annual consumption per head, in lbs. in relation to the Average of the 8 years.	Annual Expenditure on Tea, per head, in decimal parts of a pound sterling.	Excess or Deficiency of annual Expenditure per head in relation to the Average of the 8 years.
		lbs.	s. d.	lbs.	lbs.	£	£
1839	26,516,000	35,127,000	1 10	1·321	— ·103	·265	— ·022
1840	26,789,000	32,252,000	2 6	1·206	— ·218	·281	— ·006
1841	27,064,000	36,675,000	2 4	1·351	— ·073	·306	+ ·019
1842	27,342,000	37,355,000	2 2	1·363	— ·061	·294	+ ·007
1843	27,624,000	40,293,000	1 7½	1·452	+ ·028	·273	— ·014
1844	27,909,000	41,363,000	1 7¾	1·487	+ ·063	·281	— ·006
1845	28,196,000	44,180,000	1 8	1·564	+ ·140	·308	+ ·021
1846	28,487,000	46,728,000	1 5	1·648	+ ·224	·295	+ ·012
			Average	1·424	Average	·287	

The quantity of tea charged with duty, as retained for home consumption, in 1847, was 46,324,298 lbs.: giving a proportion per head on the population of 1·609 lbs.; or 185 more than the average of the preceding eight years.

*An Account of the Quantity of SUGAR consumed annually per head—and also of the annual Expenditure on Sugar per head—with the annual Variations of each, in relation to the Averages of the whole Period of Eight Years—[1839-1846.]*

Years.	Population of the United Kingdom, by computation.	Quantity of Sugar (unrefined) entered for Home consumption.	Average Price per cwt. in bond.	Annual consumption per head in decimal fractions of a cwt.	Excess or Deficiency of Annual consumption per head in relation to the Average of the 8 years.	Annual Expenditure on Sugar, per head, in decimal parts of a pound sterling.	Excess or Deficiency of annual Expenditure on Sugar, in relation to the Average of the 8 years.
		cwts.	s. d.	cwt.	cwt.	£	£
1839	26,516,000	3,825,000	39 4½	·144	— ·007	·456	+ ·007
1840	26,789,000	3,594,000	48 7¾	·134	— ·017	·492	+ ·043
1841	27,064,000	4,057,000	38 3¼	·149	— ·002	·475	+ ·026
1842	27,342,000	3,868,000	37 2½	·141	— ·010	·441	— ·008
1843	27,624,000	4,028,000	33 11½	·145	— ·006	·431	— ·018
1844	27,909,000	4,139,000	33 5	·147	— ·004	·433	— ·016
1845	28,196,000	4,880,000	32 9	·172	+ ·021	·410	— ·039
1846	28,487,000	5,227,000	35 1*	·183	+ ·032	·457	+ ·008
			Average	·151	Average	·449	

\* Official annual average price of sugar not obtained. This an average of twelve weekly averages, taken monthly.

The quantity of sugar (unrefined) imported and charged with duty for home consumption, in 1847, was 5,791,783 cwts.: giving a proportion per head on the population of 201 of a cwt., or 050 of a cwt. more than the average of the preceding eight years.

*An Account of the number of bushels of Malt charged with Duty, the amount of the Duty, and the proportion per head on the Population, of the quantity of Malt charged, and of its cost to the consumers, as these varied during the nine Years from 1838 to 1846 inclusive.*

Years.	Malt charged in England.	Average Price of Barley per Bushel.	Malt charged in Scotland.	Malt charged in Ireland.	Malt charged in the United Kingdom.	Proportion per head of Malt charged in the United Kingdom.	Excess or Deficiency of the Proportion per head of Malt charged, in relation to the Average of the 9 years.	Total Cost of the Malt charged, being the Cost of the Barley at the Average Price of the year, plus the Amount of the Duty.	Proportion per head on the Population of the total Cost of the Malt.	Excess or Deficiency of the Proportion per head of Malt charged, in relation to the Average of the 9 years.
	Bushels.	s. d.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	£	£	£
1838.....	33,823,985	3 11	4,419,141	2,262,440	40,505,566	1.54	+ .14	13,110,274	.49	+ .02
1839.....	33,826,016	4 11½	4,360,373	1,744,552	39,930,941	1.49	+ .09	14,962,585	.564	+ .094
1840.....	36,653,442	4 6½	4,397,304	1,406,116	42,456,862	1.58	+ .18	15,229,990	.568	+ .098
1841.....	30,956,394	4 1½	4,058,362	1,149,692	36,164,448	1.33	— .07	12,302,872	.45	— .02
1842.....	30,796,262	3 5½	3,786,476	1,268,656	35,851,394	1.31	— .09	11,014,956	.40	— .07
1843.....	30,891,002	3 8½	3,618,607	1,184,281	35,693,890	1.292	— .108	11,395,463	.41	— .06
1844.....	31,856,551	4 2½	3,889,458	1,441,177	37,187,186	1.33	— .07	12,836,332	.45	— .02
1845.....	30,508,840	3 11½	4,353,038	1,684,112	36,545,990	1.296	— .104	12,137,324	.43	— .05
1846.....	35,653,000	4 1	4,586,000	1,740,000	41,979,000	1.47	+ .07	14,228,916	.49	+ .02
					Average.....	1.40		Average....	.47	

The quantity of Malt charged with Duty in the United Kingdom, in 1847, was 35,304,217 bushels; giving a proportion per head on the population of 1.22 bushels, or .18 of a bushel less than the average of the preceding eight years.

*An Account of the Quantity of SPIRITS, British, Foreign, and Colonial, charged with Duty in each Year, from 1838 to 1846 inclusive—with the annual Proportion per head on the Population\*.*

Years.	In England.	Proportion per head on the Population in England.	In Scotland.	In Ireland.	In the United Kingdom.	Proportion per head on the Population in the United Kingdom.	Excess or Deficiency of the proportion per head on Population in each year, in relation to the Average of the whole period, in the United Kingdom.
	Galls.	Galls.	Galls.	Galls.	Galls.	Galls.	
1838	12,136,232	·79	6,384,255	12,334,281	30,854,768	1·17	+ ·23
1839	12,063,926	·78	6,301,825	10,848,509	29,214,260	1·10	+ ·16
1840	11,804,147	·75	6,271,496	7,427,904	25,503,547	·93	- ·01
1841	11,511,907	·72	6,078,719	6,515,781	24,106,407	·89	- ·05
1842	11,056,096	·68	5,667,113	5,320,196	22,042,905	·80	- ·14
1843	10,785,750	·65	5,665,618	5,574,921	22,026,289	·79	- ·15
1844	11,368,790	·68	6,001,090	6,481,251	23,851,131	·85	- ·09
1845	12,507,995	·74	6,525,489	7,638,993	26,672,477	·94	....
1846	....	....	....	....	28,360,934	·99	+ ·05
					Average	·94	

The Population being estimated, as before described, to have increased in the proportion of the average from 1821 to 1841.

The quantity of spirits charged with duty in the United Kingdom, in 1847, was 25,535,897 gallons; giving a proportion per head on the population of ·88 of a gallon, or ·06 of a gallon *less* than the average of the preceding eight years.

The table relating to tea is obviously that upon which most reliance is to be placed. Though the bonded price of tea has varied considerably, the duty (which has, during the greater part of the time, exceeded the price of congou) has only varied once, and that but slightly, and near the beginning of the period in view, when (15th May, 1840) the duty was increased by an addition of 5 per cent. Neither the quantity consumed, nor the expenditure per head, affords, however, a just indication of the condition of the people. The quantity consumed was limited, in the earlier years, as well by a high price as by want of means to purchase; and in the latter years both these conditions were reversed: lower prices and increased means of purchase coming together, so as to render it extremely difficult, if not impossible, to assign to each its due share in the general effect. The two years of prosperity, 1843-44, show a smaller expenditure per head on tea than any of the three preceding years, 1840, 1841, 1842; and though the quantity consumed is increased, the coincident fall of price claims a share in the production of that effect, and a share the extent of which we have no means of defining.

The table relating to sugar is still less satisfactory, from the greater number and variety of the corrections requisite to render inferences from it practically trustworthy. The column showing the expenditure per head cannot be held to indicate the varying condition of the people, till due allowance has been made for the fluctuations of the cost to the consumer, as affected (sometimes in opposite directions) by variations of supply, and by changes of the duty. And the column showing the variations in the quantity annually entered for consumption requires a still further correction, for the disturbance of the ordinary operations of the trade, either by extraordinarily high prices, or by anticipations of a change of the import duties.

There was, apparently, a very remarkable diminution of the quantity of sugar consumed in 1840, as compared with 1839, and an equally remarkable increase in 1841. It will be observed that the average price of 1840 was unusually high; but this alone does not account for the altered rate of consumption. Some portion of the explanation is found in a closer examination of the basis of the table. The average price given for the year 1840 is no more the price proper to the natural supply of that year (which was extremely short), than the price of wheat in any astronomical year is that proper to the produce of any particular harvest. The bulk of the sugar-crop of the West Indies, the failure of which in 1839-40 caused the high price, reaches this country early in the summer. The prices of the first four or five months of the year are ruled by the previous supply, rather than by that yet to come; and hence, if the year was made to begin in May, the price of 1840-41 would be much higher than that given for 1840; and that of 1841-42 much lower than that given for 1841. Instead of being as 48*s.* 7*d.* to 38*s.* 3*d.* they would be as 53*s.* to 36*s.*, or thereabouts. So large an addition as was thus made, in the spring of 1840, to the price of sugar in bond, would, of course, (the cause of the addition being obviously temporary) induce dealers to bring down their stocks (bought at prices 20, 30, or 40 per cent. lower than those then prevailing) as low as possible, so as to postpone the need for further purchases. Something is also to be allowed for an increase of the practice of adulterating sugar, which, it is to be feared, invariably follows any material increase of the bonded price. When the more abundant crop of 1841 arrived, and prices fell, a portion of the new supply would be taken out of bond simply to replenish stocks in the hands of dealers; and this appearing undistinguished in the annual entries "for consumption" would, as it does by the table, unduly enhance the apparent quantity consumed in that year. In like manner, the quantity consumed under the high prices of 1840 was greater in fact than as it appears in the table; as not only the quantity taken out of bond in that year, but also a large proportion of what is usually retained in stock by the dealers, was consumed. Perhaps the nearest practicable approximation to the correct figures would be made by adding together the quantities taken in the two years, 1840 and 1841, and distributing the consumption solely by reference to the price, seeing that those two years were nearly on a par in every other circumstance apparently influencing the quantity consumed. A mere average, however, will remove the anomalous character of the figures as they now stand, thus:—

	Consumption, per head, Cwt.		Expenditure, per head, £
1840.....	·134	.....	·492
1841.....	·149	.....	·475
Average ..	·141	Average....	·483

It may here, however, be observed that the influences which thus operated, to an exaggerated extent, upon the sugar trade of 1840, are also to be allowed for as operating to some extent under every material variation of the price (to the dealer) of articles of general and constant demand, of which the stocks in hand are either large enough to admit, by their reduction, of a postponement of the dealers' demand, or of such a nature as to facilitate the apparent increase of quantity by adulteration.

It is also to be observed, generally, that the extension of the railway system between London and all the other principal ports of entry for foreign supplies, and every other part of the kingdom in which articles of foreign production are held in stock for immediate consumption, has so far facilitated the gradual reduction of these stocks during the period in view, that we may safely infer that the quantities of tea and sugar, and of all similar articles, actually consumed, particularly in the latter years, were somewhat greater than the quantities taken out of bond.

As to the tables relating to the comparative consumption of malt and spirits, though the supply and the prices of both may have remained unaffected by the variation in the price of barley, the consumption of both has, undoubtedly, been materially interfered with by influences apart from those the development of which is now particularly desired. It would appear that the consumption of malt was highest in the years 1838, 1839, and 1840, when the price of barley was also highest; and that the consumption was lowest in the five years, 1841 to 1845 inclusive, when the price of barley was lowest. But assuming (as would thus appear) that the price of barley had little or no influence upon the consumption of beer and spirits, it is strange that the earlier years, being years of decided depression among the principal consumers of both, should exhibit at once a larger quantity of malt consumed and more paid for it. It would seem that either the quantity of malt charged in any given year is no index to the current consumption of beer and spirits,—or that the profits of brewers and distillers admit of enormous variation of amount,—or, finally, that the quantity of beer or spirits, or both, consumed, per head, has been steadily decreasing, from causes wholly apart from variations of price, or of the means of purchase possessed by the consumers.

At this point of the inquiry it may be advisable to take a combined view of the four tables; as, in some degree, explaining each other. It will be observed that those years in which the evidence previously adduced has established the existence of the greatest depression, were also the years in which (so far as the imperfect nature of the information afforded by these tables will enable us to arrive at any positive conclusion) the quantity of malt and of spirits consumed per head, and also the proportion of the incomes of the people devoted to their purchase, was greatest; and the quantity of tea and sugar consumed, and the proportion of the income spent upon them

was least. And if we then turn to the years of apparent prosperity, we find more tea and sugar consumed per head, and less malt and spirits; though, in these years, the means of purchasing each must have been greatly and about equally augmented\*.

Such is the first, and perhaps the most remarkable, inference to be deduced from a combined view of these four tables. If, however, we compare the annual variations of the consumption of, and apparent expenditure upon, all these articles, we find some ground for inferring that, apart from all other influences, there has been a gradual change of the habits of the consumers—a transfer of their taste and of their money from beer and spirits to tea, and other similar beverages†. It will be observed that it is not necessary to the correctness of this inference to suppose, that the habits of individuals are being changed to any great extent. If we take the annual mortality in the United Kingdom, of persons between 15 and 60 years of age, at 1.33 per cent, the number of persons between those ages annually removed by death, on an average of the eight years now in view, must have been about 370,000. Of those who annually come within these ages, so as to supply their places, there must be a constantly increasing proportion of persons who, in accordance with the growing intelligence and the changing habits of the community in other respects, prefer coffee or tea to beer or spirits.

The increased consumption of malt, shown in the returns for 1846, may perhaps be traced mainly to the demand of the great number of men employed in 1845 and 1846 upon railway-works. Their congregation, in many instances, in temporary villages or encampments on the line, separated from their families, and apart from the influences of home, has, as is known through official inquiries, had an evil effect upon their habits, and, combined with hard labour in the open air, could hardly fail to lead to an increased consumption of both beer and spirits.

The table relating to spirits requires one or two special remarks. The effect of the temperance movement under Father Mathew, appears to have been confined, for the most part, to the consumption of spirits in Ireland, and by Irishmen in Great Britain; I have, therefore, kept the returns for each of the three kingdoms distinct. The foreign and colonial spirits form but a small part of the whole, and are chiefly consumed by the middle and upper classes. The reduction of the import duty in 1846 is, however, to be allowed for, in considering the general increase of consumption in the last year of the period.

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In regarding the variations of the prices of such articles as wheat, barley, oats, beef, mutton, tea, sugar, &c., with reference to any

\* This inference, however, as well as every other deduced from materials so scanty as those yet available for the investigation of the present subject, is to be received with due regard to several circumstances adverted to in the following pages, as well as to those which have already been particularly referred to. *Especially* the results of the "temperance movement" are to be kept in view.

† And here I may observe that, were the present paper not already more than sufficiently extended, I might have brought forward strong confirmation of the correctness of this inference from the official accounts of the concurrent entries for consumption of coffee and cocoa.

influence they may have had in producing, or aiding, variations in the material condition of the people, it will not be forgotten that fluctuations in the prices of such articles necessarily produce corresponding fluctuations in the prices of many others. For instance, besides the grain consumed for human food, there is a considerable demand for the consumption of cattle, for brewing and distilling, and for manufacturing purposes. Thus the feeders of horses and other cattle, brewers and distillers, and manufacturers, become, in time of scarcity, strenuous competitors with the bulk of the community for a share of the common supply of food, and, finally, the farmers themselves must either withhold from the market, or purchase, the quantity requisite for seed. If there be also, from other causes, as there was during the period now in view, a short supply and high prices of other principal articles of food, such as those already mentioned, a general increase of the cost of production, and so of the price, of every article of general use, is obviously a natural, and all but inevitable, consequence.

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If, turning from the conclusions arrived at, or approached, through the medium of these calculations, we refer to the current of public events during the period in question, these would appear to afford no slight confirmation of the results obtained by the more abstract method.

The riots in Birmingham, in July, 1839, the outbreak at Newport (Monmouthshire,) in the following November, and the similar disturbances in Sheffield, in January, 1840, seem to point significantly to the growth of an uneasy condition of the operatives in the manufacturing districts, in the summer, autumn, and winter of 1839-40. These would appear to have been the first movements of the "rebellion of the belly," consequent upon the high prices of food, and the depression of trade, following the defective harvests of 1838 and 1839.

When the distress had continued for some time, even though it became deeper, the manner of its expression was changed. It was shown in complaint, rather than in outrage. The firm, and from the first successful, repression of these outbreaks was followed by comparative quiet, though apparently under increasing suffering, for more than a year.

In the summer of 1841, public complaints of want of employment, and of the high prices of food again became general. Meetings of the municipal authorities took place in Manchester, Leeds, Bolton, Stockport, and other places in England, and in several of the manufacturing towns of Scotland, for the express purpose of making known the particulars of, and devising measures to relieve, the distress prevailing among the labouring poor. And as the time approached for the prorogation of Parliament in 1841, numerous public meetings were held to petition that the effect of the import duties on corn might first be considered.

As the winter came on, and the usual suspension of farming operations threw the agricultural labourer upon a still more scanty subsistence, incendiary fires appeared in several of the southern counties. The ensuing half year, ending at Lady-day, 1842, was, as has been

shown, one of severe pressure upon the poor's rate in all parts of England and Wales.

Early in the summer of 1842, (May,) public meetings and disturbances again took place in Lancashire and Cheshire, always in avowed connection with the general scarcity of employment, the high prices of food, and the influence attributed to the Corn Laws in the production and perpetuation of both. In the beginning of June the disturbances assumed a more alarming form, in a general strike of the colliers of the midland counties, several thousands of whom turned out and stopped the working of the pits, in which others were disposed to remain at their employment. Before the middle of July (1842,) all work was stopped in the iron and coal works of that part of the country, and in the Staffordshire potteries; and in the first week in August all the manufacturing towns of Lancashire and the West Riding of Yorkshire, and the collieries in the West of Scotland, were included in the general stoppage.

This was the culminating point.

Thenceforward everything moved towards a change for the better. The harvest proved to be abundant, and was secured in good condition. It was also assisted, in its effect upon prices, by large foreign supplies, sent forward in anticipation of a continuance of the scarcity of the previous four years. The termination of the war with China (in August, 1842,) put a stop to a considerable branch of government expenditure, and substituted the prospect of a speedy reimbursement of what had been spent. It also caused a rapid fall in the prices of tea; and the re-opening of the China trade, with liberty to carry our commerce into four additional ports, led to a brisk renewal of the export trade to that country, which, during the following spring, contributed to call the factories again into active employment. Within the last few weeks of the same year (1842,) came news of the successful advance of the British army on Cabul, and its safe retreat, after rescuing the British prisoners, and avenging the disasters of the year before. The apparent certainty of abundant supplies of food at moderate prices, and the improved aspect of our affairs abroad, tended strongly to diffuse a general feeling of confidence in the approach of more prosperous times. The funds rose, credit was extended, and the rate of discount on commercial bills, of the first class, fell, between August 1842, and January 1843, from 4 to 2 per cent.

From this time forward the complaints from the manufacturing districts were gradually less and less heard.

The winter of 1842-3, however, though not a severe one, was marked by the heaviest pressure upon the poor's rate which had been felt since 1835. The following figures, taken from the reports of the Poor Law Commissioners, will afford some idea of it:—

For the Years ending at Lady-day.		
	Amount expended in Relief and Maintenance of the Poor in England and Wales.	Average price of Wheat per quarter.
	£	s. d.
1839 .....	4,406,907	69 4
1840.....	4,576,965	68 6
1841.....	4,760,929	65 3
1842.....	4,911,498	64 0
1843.....	5,208,027	54 4

The continuous increase of the general burden of pauperism, down even to Lady-day, 1843, notwithstanding so considerable a reduction during the last year in the price of grain, seems to be best explained by the gradual exhaustion of the means of the labouring classes. Though the price of food was so much reduced, their means of purchasing it would appear to have been reduced in a still greater proportion; and these were not generally replenished till the resumption of commercial activity, begun in the spring of 1843, had, towards the close of the summer, brought more or less within its influence the whole mass of the labouring population.

The general condition of the labouring classes in the latter half of 1843, during the whole of 1844-45, and down to the autumn of 1846, was commonly stated at the time to be one of full employment, with moderate prices of food, and tranquillity scarcely disturbed. The only remarkable exception is that which has already been observed upon, as existing at the commencement of this period, and in the condition of the agricultural labourer.

The pressure which had fallen first upon the manufacturing was removed last from the agricultural districts.

The large influx of foreign corn in 1842 depressed the value of the home supply considerably below the point indicated by its own abundance. And though the supply, both home and foreign, was much less (in comparison with the then higher current demand,) from the harvest of 1843 forward, than in the preceding year, this seems to have brought but little relief to the farmers; and the abundant harvest of 1844 again induced a strong and general feeling of depression.

In the summer and autumn of 1844, open expressions of discontent among the agricultural labourers, and frequent incendiary fires in the southern counties, drew the attention of the public to their condition; and in November and December of that year, when, in the metropolis and in the chief manufacturing towns, public meetings were becoming numerous in connexion with the sanitary condition of the workpeople, and the stress laid upon the necessity for commodious apartments, with sufficient supplies of good air and water, and the means of healthful recreation, proved, most significantly, that the more pressing needs of a year or two before had, in those districts, passed away, other public meetings were elsewhere being held, to devise means of raising the class of agricultural labourers from a state

in which it appeared that the means of even the barest subsistence were scarcely attainable.

It has already been shown that very soon afterwards, that is to say, in the spring of 1845, the condition of the agricultural districts exhibited signs of improvement, in a marked diminution of the rate of increase of the distress; and it would appear, that the summer of that year placed these districts in a state of prosperity nearly resembling that previously enjoyed by the manufacturing districts. How far the increased demand for labour in connexion with the railway speculations of 1844 and 1845 was a cause of this change, is one of those branches of the present inquiry upon which I must at present refrain from entering.

The temporary addition made to the apparent amount of the current income of the community during the speculations of 1845, was of a character which seems scarcely to call for remark, beyond a mere reference to the fact. That the consumption of all articles of convenience and luxury was materially increased in that year, is in some degree proved by the Customs and Excise returns; and these are, as far as I can learn, amply confirmed by the personal knowledge of those who at the time possessed adequate means of observation.

The causes which have, since September 1846, operated, through the failure of the cotton and potato crops of that year, and the high prices of grain and meat, in limiting employment in the manufacturing districts, by checking the demand for all articles but those of primary necessity, as well as the effect of the continued employment given upon railway works in keeping up the ordinary demand from one section of the labouring classes, and the aggravation of the resulting distress by severe pressure upon the money-market, are, so far as they concern the present subject, too obvious, and of too recent occurrence to require further exposition.

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Regarding this paper as a mere contribution towards the investigation of a subject of the highest interest to the community at large, and hoping to use it, or see it made use of, in aid of more extensive and minute inquiries, I have made no effort to impart to it the appearance of a completeness to which it can, in fact, have no pretension. In conclusion, however, I am desirous of drawing attention to one, in particular, of the leading lines of inquiry suggested by the facts stated, and which the scope of the paper will not permit me to do more than suggest.

The continuance of distress in the agricultural districts so long after that prevailing in the manufacturing districts had been succeeded by comparative prosperity brings to view a remarkably interesting problem; and as, during the preparation of this paper, I have been led to regard it with much attention, I will venture to offer to those who may, with better means, attempt its solution by a strictly statistical method, the inferences bearing upon which I am inclined to deduce from the materials here presented.

The matter in doubt, it will be observed, arises thus:—All the evidence adduced and analysed in the preceding pages points to the conclusion that during the greater part of the period now under review, the agricultural labourers, though not exposed to the

same violent alternations of condition as their fellow-labourers in the manufacturing towns, were suffering from influences of more enduring operation, one of the most striking results of which was, as has been seen, a constant increase of the proportionate number of paupers among them, down to the Lady-day quarter of 1845, at least a year and a half after a decided change for the better had become manifest in the manufacturing districts. One of the principal causes of this prolongation of the depression in the agricultural districts may, I conceive, be found in the fact that the rapid growth of our manufacturing system has made a migration of young persons from the agricultural to the manufacturing districts a constant and necessary operation. The rate of increase of the agricultural population having, in some degree, adjusted itself to the furnishing of the needful average supply, a material reduction of the demand, especially if continued over a period of four or five years, cannot but have the effect of disturbing, most injuriously to the agricultural labourer, the state of the labour market as it bears immediately upon him. The accumulated supply of young men and women, retained to out-bid their elder relatives in the field, instead of finding their way to the factory, must, in many instances, become permanently fixed in the occupations of the former; and when, at length, the revival of trade in the towns, having first given employment to the resident population, (also increased in the interval,) again offers an opening to immigrants from the country, those who have been ousted in competition with younger men at home, (while these had no such opening,) must find themselves placed at even a greater disadvantage in any attempt to compete for town employment. Thus it would appear, that the stream of migration from the country districts, (continuing to flow under influences not *immediately* affected by changes in the cost of subsistence, or in the current amount of employment,) if once dammed back, even for a year, does not again find its level without the lapse of a considerable interval, and then only through the medium of severe depression and suffering.

Guided by these considerations, I am inclined to infer, that the remarkable difference observed in the fluctuations of the proportion of pauperism to population in the agricultural and manufacturing districts would probably, were the comparison carried over a longer period, be explained as arising from the prevalence, in the two descriptions of districts, (as affected by the same general influences,) of two rates of fluctuation, identical as to their causes and mode of operation, and distinguished only by *the difference of the bearing* of these upon the peculiar occupations and social condition of each district.

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I cannot bring this paper to a close without referring to the evidence bearing directly upon its subject, to be found in several papers which have already appeared in the Journal of the Society; in particular I may mention a very valuable paper in Vol. IV., by William Neild, Esq., Mayor of Manchester, comparing accounts of *the actual income and expenditure of labouring families in Manchester and Dukinfield in 1836 and 1841*, and another in Vol. V., by Henry Ashworth, Esq., one of the Directors of the Chamber of Commerce of Manchester in 1842, on the *then existing depression of trade at Bolton, showing the mode*

in which it affected the different classes of a manufacturing population. These papers will be found to afford a very striking view of the extent and degree of the depression prevailing in the districts of the cotton manufacture during the first two or three years of the period brought to view in the present paper; and if taken in conjunction with it will, I trust, supply in some degree, as to the earlier years, the deficiencies incident to an attempt to treat so large a subject with due strictness, in the present state of statistical science.

*Statistics of Crime in England and Wales, for the Years 1834—1844.*

By F. G. P. NEISON, F.L.S., &c., *Actuary to the Medical, Invalid and General Life Assurance Society.*

[Read before the Statistical Section of the British Association at Oxford, 28th of June, 1847, being in continuation of a Paper read at the Meeting at Southampton on the 15th of September, 1846.]

In this paper it is intended to investigate the influence of Education on the Development of Crime. On a former occasion, when an analysis was made of the state of crime in England and Wales, it appeared that, of a variety of elements tested and supposed to exercise some material influence on crime, none was found subject to any definite law, or to manifest any direct control over the increase or decrease of crime, except education. As the greater portion of that paper was devoted to various matters necessarily preliminary to the question of education, it is now proposed to enter more fully into the very important discussion of the influence of education on the criminal calendar of the country.

In connexion with the results, adduced in the former paper\*, it will be important to view the amount of education among criminals themselves. During the years 1842, 3, and 4, there were

21,779 or 31·3 per cent. of all the criminals who could neither read nor write ;  
 41,620 or 59·8 per cent. who could read and write imperfectly ;  
 5,909 or 8·5 per cent. who could read and write well ; and  
 308 or 0·4 per cent. of superior education.

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69,616

1,924 whose instruction was not ascertained.

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71,540

It is thus curious to observe, that while the proportion of criminals who could neither read nor write was 31·3 per cent. the ratio of persons who signed their marriage register with marks, (that is, were unable to write their names) was 33 per cent.; and it might thence be inferred that, from the small difference in those two ratios, education could have no very important effect in repressing or augmenting the number of criminals: but the number of persons signing their marriage registers with marks should not be taken as the absolute,

\* *Statistical Journal*, Vol. IX., p. 223.

but only as the relative degree of education in different districts; and it should be borne in mind, that although 33·0 is the average for the whole of England and Wales, there are some districts in which the proportion is as low as 12 and 14 per cent., and others in which the ratio is as high as 50 and 51 per cent.; and it has also been already shown, that no reliance can be placed on the mere gross average results thus given, but that it is imperatively necessary to separate the whole into groups, in which the influences of wealth, manufactures, and agriculture are common—in fact, into groups differing in respect of education only, so as to furnish a proper argument for or against the influence which education may have on the amount of crime.

According to the returns of the Registrar General, the proportion of males signing their marriage registers with marks has gradually decreased from 33·7 per cent. in 1839, to 32·4 per cent. in 1844. It also appears that during the same years the number of criminals unable to read or write has decreased from 33·5 per cent. in the former year to 29·8 per cent. in the latter; but it does not follow on this account that education is favourable to crime, for it may happen that increased temptations over the country generally have arisen within that period; and the question would still remain open, whether in the higher educated districts crime was greater or less than in the lower educated districts, all the other conditions of those districts being the same.

Adopting the test furnished by the records of the Registrar General, it is obvious that in those counties in which there is an inferior degree of education, there is also an increased ratio of crime; and that not a small and barely appreciable difference, but in 11 different groups of counties into which the whole of England and Wales is divided, showing a difference in favour of the best educated districts varying from 13 to 43·9 per cent., and averaging 25 per cent. for the whole of England and Wales. It is thus evident, that so far as the test now furnished is available, more conclusive evidence could not be called for.

This test, however, being derived from a source partly independent of the criminals themselves, has led to a similar analysis of an educational test to be derived from among the criminal population. The Home Office returns show for each year the number of criminals *who can neither read nor write—who can read and write imperfectly—who can read and write well—and have a superior education.*

Attention will first be given to the two first classes of criminals. The various counties of England have been placed into six different groups, in the two first of which the ratio of crime does not differ by 15 per cent. above and below the average for England and Wales. In the next two groups the difference of crime is from 15 to 30 per cent. above and below the average. And in the last two groups the difference is at least 30 per cent. above and below the average respectively. For each of these groups the educational condition of the criminals has been abstracted, the detailed results of which are given in Table I., Appendix, and from which the following abstract is taken:—

Groups of Counties in which the	Above the average Crime.					Below the average Crime.				
	Number who could neither Read nor Write.	Number who could Read and Write imperfectly.	Number who could Read and Write well.	Of Superior Education.	Instruction could not be ascertained.	Number who could neither Read nor Write.	Number who could Read and Write imperfectly.	Number who could Read and Write well.	Of Superior Education.	Instruction could not be ascertained.
Difference of crime under 15 per cent.	6,875	11,071	1,187	75	422	2,292	4,859	746	23	127
Difference, 15 per cent., and under 30 per cent. ....	5,332	10,417	2,361	71	691	2,414	5,791	654	52	166
Difference, 30 per cent., and upwards .....	3,311	6,381	724	71	161	933	2,186	150	9	111

Groups of Counties in which the	Above the average Crime.					Below the average Crime.				
	Ratio which could neither Read nor Write.	Ratio which could Read and Write imperfectly.	Ratio which could Read and Write well.	Ratio of Superior Education.	Instruction could not be ascertained.	Ratio which could neither Read nor Write.	Ratio which could Read and Write imperfectly.	Ratio which could Read and Write well.	Ratio of Superior Education.	Instruction could not be ascertained.
Difference of crime under 15 per cent.	35.8	57.6	6.2	.4	2.1	28.9	61.3	9.4	.3	1.6
Difference, 15 per cent., and under 30 per cent. ....	29.3	57.3	13.0	.4	3.7	27.1	65.0	7.3	.6	1.8
Difference, 30 per cent., and upwards .....	31.6	60.8	6.9	.7	1.5	28.5	66.6	4.6	.3	3.3
Total of these Districts .....	32.4	58.2	8.9	.5	2.6	28.0	63.8	7.7	.4	2.0
Ratio of England and Wales .....	31.3	59.8	8.5	.41	2.7					

*Difference in favour of Education.*

			Of those who could neither Read nor Write.	Of those who could Read and Write imperfectly.
Difference of Crime	15 per cent.	.....	6.9	3.7
„	„	15 and under 30	2.2	7.7
„	„	30 and upwards	3.1	5.2
Total .....			4.4	5.6

It is thus seen, that in each group in which there is an increased amount of crime, there is invariably an increased ratio of criminals who can neither read nor write. Taking the three parallel groups of counties in which those characterized by crime above the average is compared with those below the average crime, it will be seen that the difference of criminals unable to either read or write is respectively 6·9, 2·2, and 3·1 per cent. greater in the counties having an excess of crime. On the other hand, the proportion who can read and write imperfectly shows a corresponding increase in favour of the groups with a low ratio of crime, being respectively 3·7, 7·7, and 5·2 per cent.

The following are the results for the total of those counties in which crime is above and below the average respectively:—

	Where Crime is above the average.	Where Crime is below the average
The per-centage that can neither read nor write is	32·4	28·0
(Difference 4·4 per cent. in favour of Education.)		
The per-centage that can read and write imperfectly is	58·2	63·8
(Difference 5·6 per cent. in favour of Education.)		

Thus far it would seem that the evidence furnished of education, among even the criminals themselves, would go to show that the small amount of instruction consequent on the test here recognised—the simple distinction between the ability to read and write imperfectly, and being unable to either read or write at all—has a most material influence in the development of crime; and, were the investigation carried no further, we should be forced to conclude, that since the most criminal districts show a higher ratio of uninstructed persons among the criminals, and the less criminal districts a less proportion who are wholly destitute of the rudest elements of education, the immediate inference is, that even this small degree of instruction tends to the repression of crime. ✓

Unless, however, this analysis were carried beyond its present limits, it may be objected, as in the former paper, that the peculiar results produced may be owing to some other cause than education. It may happen that differences of manufactures, of agriculture, of wealth, or of position in the social scale of society, existing in combination with the degree of crime already noticed, may be the real and active agent in producing the peculiar results attributed to education. In order, therefore, to see how far the facts of the case will support this view, a more refined analysis has been made of the various counties, placing them in groups, as in Table N., in the former paper; in fact, placing those counties into groups so that they differ only in their educational condition from each other. It will thus be seen that the combinations now presented will exhibit all the conditions by which the final analysis of the former paper was brought to bear on the educational condition of the whole community. And these have been further reduced to show in precisely the same groups the state of education among the criminal population. The results in detail of this particular portion of the inquiry will be found in Table II., Appendix, from which the following abstract has been made.

Groups of Counties.	Number of Criminals in the Sections of									
	Inferior Degree of Education in the General Community (a).					Higher Degree of Education in the General Community (b).				
	Who could neither Read nor Write.	Who could Read and Write imperfectly.	Who could Read and Write well.	Of superior Education.	Instruction could not be ascertained.	Who could neither Read nor Write.	Who could Read and Write imperfectly.	Who could Read and Write well.	Of Superior Education.	Instruction could not be ascertained.
Least Agricultural .....	2,629	4,798	822	85	153	2,014	4,553	538	16	189
Greatest „ .....	1,772	2,617	243	16	70	1,413	3,065	277	28	110
Greatest Manufacturing ....	1,907	3,704	515	54	128	1,422	2,661	450	32	56
Least „ .....	1,035	1,559	117	12	38	949	1,983	158	7	51
Manufacturing interest, 33½ per cent. above the average }	2,760	5,019	790	83	145	1,164	2,601	506	7	72
Agricultural interest, 50 per cent. above the average .. }	2,071	3,456	339	31	84	1,491	3,002	243	13	100
Manufacturing and Agricultural interest, nearly equal }	1,703	2,343	244	9	59	880	1,757	211	14	81
Greatest wealth .....	1,241	2,820	345	14	95	672	1,455	372	6	40
Least wealth.....	1,357	2,370	456	30	125	1,071	2,046	167	9	81
Total .....	16,475	28,686	3,871	334	897	11,076	23,123	2,922	132	780
“Marks,” 33½ per cent. above the average, and 25 per cent. below the average .. }	2,797	4,334	416	31	149	1,826	3,726	678	23	136

Groups of Counties.	Ratio of Criminals in the Sections of									
	Inferior Degree of Education in the General Community (a).					Higher Degree of Education in the General Community (b).				
	Who could neither Read nor Write.	Who could Read and Write imperfectly.	Who could Read and Write well.	Of Superior Education.	Instruction could not be ascertained.	Who could neither Read nor Write.	Who could Read and Write imperfectly.	Who could Read and Write well.	Of Superior Education.	Instruction could not be ascertained.
Least Agricultural .....	31.5	57.5	9.9	1.0	1.8	28.3	63.9	7.5	.2	2.6
Greatest „ .....	38.1	56.3	5.2	.3	1.5	29.5	64.1	5.8	.5	2.3
Greatest Manufacturing ....	30.8	60.0	8.3	.8	2.0	31.1	58.3	9.9	.7	1.2
Least „ .....	38.0	57.2	4.3	.4	1.4	30.6	64.0	5.1	.2	1.6
Manufacturing interest, 33½ per cent. above the average }	31.9	58.0	9.1	.9	1.7	27.2	60.8	11.8	.2	1.7
Agricultural interest, 50 per cent. above the average .. }	35.1	58.6	5.7	.5	1.4	31.4	63.2	5.1	.3	2.0
Manufacturing and Agricultural interest, nearly equal }	39.6	54.5	5.7	.2	1.4	30.7	61.4	7.4	.5	2.7
Greatest wealth .....	28.1	63.8	7.8	.3	2.1	26.8	58.1	14.9	.2	1.6
Least wealth.....	32.2	56.2	10.8	.7	2.9	32.5	62.1	5.1	.3	2.4
Total .....	32.8	57.1	7.7	.6	1.8	29.1	60.8	7.7	.3	2.1
“Marks,” 33½ per cent. above the average, and 25 per cent. below the average .. }	36.9	57.2	5.5	.4	1.9	29.2	59.6	10.8	.4	2.1

*Difference in favour of Education.*

	Of those who could neither Read nor Write.	Of those who could Read and Write Imperfectly.	Of those who could Read and Write well.
Group of Least Agricultural .....	3·2	6·4	2·4
„ Greatest „ .....	8·6	7·8	·6
„ Greatest Manufacturing .....	·3	1·7	1·6
„ Least „ .....	7·4	6·8	·8
„ Manufacturing interest, 33½ per } cent. above the average..... }	4·7	2·8	2·7
„ Agricultural interest, 50 per cent. } above the average..... }	3·7	4·6	·6
„ Manufacturing and Agricultural } interest nearly equal .....	8·9	6·9	1·7
„ Greatest wealth .....	1·3	5·7	7·1
„ Least wealth .....	·3	5·9	5·7
Total .....	3·7	3·7	·0
“Marks,” 33½ per cent. above the average, } and 25 per cent. below the average..... }	7·7	2·4	5·3

A remarkable feature presents itself in this abstract. The form in which the Table is arranged shows not only districts in which there is an inferior degree of education in the general community, accompanied with an increased amount of criminals, but also at the same time an increased ratio of uninstructed criminals in the same districts, compared with that in the higher educated districts, and a reduced rate of crime. The agreement, therefore, of those two very different educational tests, and their general assimilation throughout, may be safely regarded as sufficient indications of the relative amount of actual education in the respective districts; and, consequently, should any uniform or constant increase or decrease of crime be found to fluctuate with the amount of education thus determined, it will furnish the argument for or against the influence of education on the development of crime.

From the preceding abstract it however appears, that in nine out of the eleven combinations represented there is a marked difference in favour of education; or, in other words, there is constantly an increased ratio of uninstructed criminals where crime is above the average, and also a reduced ratio of uninstructed criminals where crime is at a lower ebb. In the greatest agricultural district it will be seen that in the group in which crime is least, there is 8·6 per cent. less of uninstructed criminals than in the other group of the districts where a higher ratio of crime prevails. Again, take the districts in which the manufacturing and agricultural interests are nearly equal, and it will be found that in the group of least crime, there is 8·9 per cent. less of uninstructed criminals than in the parallel group of higher crime. Also take the groups representing those districts of the country in which persons who marry signing the register with their marks, exceed the average of the country by 33½ per cent., and likewise in which those so signing are less than the average by 25

per cent., and it will be found that the former shows an increase of 43·9 per cent. of crime over the latter district, and at the same time an increase of 7·7 per cent. of uneducated criminals. In this instance, as well as in all the others referred to in the same abstract, we may observe the following most important combination represented:—the districts of the country in which the general population is worst educated, the districts in which the greatest amount of crime prevails, and in which there is the highest proportion of uneducated criminals, are found constantly assimilating; while, on the other side of the question, we have to view those districts of the country which are best educated, the least criminal, and in which a less proportion is found of uneducated criminals, identified. Since it thus appears, by adopting either of the available tests of education, that crime and ignorance are constant companions, and prevention being better than cure, it becomes an important, if not imperative duty, to reduce the amount of crime by the simple means of a good general education. As already stated, education in its higher sense must of necessity disseverate itself from crime, and this eminent degree of education will perhaps be long impossible of attainment to the whole population of any country; but there seem to be no insuperable difficulties in the way of imparting to the bulk of a community something above the mere elements of reading and writing at least; and in this limited sense it is evident there is to be found a powerful check on crime, and no doubt the most efficient means of subduing the evil propensities of the people.

In Table III., Appendix, an analysis will be found of the educational condition of criminals during the years 1836, 7, 8, 9, for each of the six classes of crime given in the Home Office Returns.

1. Offences against the person.
2. Offences against property committed with violence.
3. Offences against property committed without violence.
4. Malicious offences against property.
5. Forgery and other offences against the currency.
6. Other offences.

The facts were thrown into this form or shape with a view to determine, if possible, whether there was any, and what, difference in the education of criminals committed for various classes of offences. It will be seen from the following abstract of this Table, that the proportion of criminals who could neither read nor write was highest in the class (3) for offences against property committed without violence, and least in the class (5) of forgery and other offences against the currency; being 35·29 in the former, and 24·44 in the latter, who could neither read nor write. Again, the ratio of those who could *read and write well* was least in the class (2) of offences against property committed with violence, being 9·53 per cent., and highest in the class (5) of forgery and other offences against the currency; and those of superior instruction were also lowest and highest in the same two classes, being only 23 in the former class, and 2·25 in the latter. The results for the whole of these classes combined during the same years, were of those who can—

Neither read nor write .....	34·16	per cent.
Read and write imperfectly .....	53·93	„
Read and write well .....	11·32	„
Superior instruction .....	0·57	„

## MALES.

Degree of Instruction.	Division (1)	Division (2)	Division (3)	Division (4)	Division (5)	Division (6)	Total.
Number who could neither read nor write ....	1,733	1,817	20,188	144	326	903	25,111
Number who could read and write imperfectly....	3,238	2,994	30,852	203	722	1,637	39,646
Number who could read and write well .....	1,113	508	5,955	60	256	433	8,325
Number possessed of superior instruction ....	112	12	215	5	30	48	422
Number whose instruction could not be ascertained}	579	42	723	20	4	519	1,887
Total number of offenders in each class.....}	6,775	5,373	57,933	432	1,338	3,540	75,391

## MALES.

Degree of Instruction.	Division (1)	Division (2)	Division (3)	Division (4)	Division (5)	Division (6)	Total.
Ratio who could neither read nor write .....	27·97	34·08	35·29	34·95	24·44	29·89	34·16
Ratio who could read and write imperfectly .....	52·26	56·16	53·93	49·27	54·12	54·19	53·93
Ratio who could read and write well .....	17·96	9·53	10·41	14·56	19·19	14·33	11·32
Ratio of superior instruction .....	1·81	·23	·38	1·21	2·25	1·59	·57

The following abstract will show the results for the same four years for the female sex.

## FEMALES.

Degree of Instruction.	Division (1)	Division (2)	Division (3)	Division (4)	Division (5)	Division (6)	Total.
Number who could neither read nor write .....	229	144	5,759	14	196	183	6,525
Number who could read and write imperfectly ....	401	149	8,002	30	194	264	9,040
Number who could read and write well .....	66	13	680	....	24	60	843
Number possessed of superior instruction .....	2	....	24	....	....	1	27
Number whose instruction could not be ascertained.}	70	1	174	....	2	60	307
Total number of Offenders in each Class.....}	768	307	14,639	44	416	568	16,742

## FEMALES.

Degree of Instruction.	Division (1)	Division (2)	Division (3)	Division (4)	Division (5)	Division (6)	Total.
Ratio who could neither read nor write .....	32·81	47·06	39·81	31·82	47·34	36·02	39·70
Ratio who could read and write imperfectly .....	57·45	48·69	55·32	68·18	46·86	51·97	55·00
Ratio who could read and write well .....	9·46	4·25	4·70	....	5·80	11·81	5·12
Ratio of superior instruction .....	·29	....	·17	....	....	·20	·16

The ratio of those who can neither read nor write is thus lowest for class (4), and highest for class (5), being 31·82 per cent. in the former, and 47·34 in the latter; but during those four years it appears that in the class (4), for malicious offences against property, there was not a single one in the whole of England and Wales returned as being able to read and write well, or as possessing superior instruction; so also in the class (2), of offences against property committed with violence, and in the class (5), of forgery and other offences against the currency, not a single instance occurred in the whole kingdom during those years, of a person being committed possessing superior instruction. Amongst females, class (1), including the offences against the person, seems to be the most remarkable, as the ratio of those who could

Neither read nor write, was .....	32·81 per cent.
Read and write imperfectly .....	57·45    "
Read and write well .....	9·46    "

The following will exhibit the relative degrees of education in the aggregate of the criminal classes of both sexes during the years 1836, 1837, 1838, and 1839.

Degree of Instruction.	Males.	Females.	Difference.
Ratio who can neither read nor write ..	34·16	39·71	— 3·55
„ can read and write imperfectly .....	53·94	55·01	— 1·07
„ can read and write well .....	11·33	5·12	+ 6·21
„ of superior instruction .....	0·57	0·16	+ 0·41

It will thus be seen, that although a higher ratio of females were able to read and write imperfectly, still a greater proportion of females could not read nor write at all; and, while 5·12 per cent. only of females could read and write well, there was 11·33 per cent. of the males who were equally instructed.

It may appear anomalous, that if education be held to have so powerful an influence in repressing crime, and that the female criminals are less educated than the males, that the ratio of crime is not also greater in the female sex. This argument, however, would be based on a very narrow and limited view of the question, for the application of the mere test of education itself will not always be sufficient to determine the relative amount of crime. Before applying this or any other test, it is necessary, in order to see its full influence or

effect, that the two districts or groups compared should be similar in all other conditions, social and otherwise, and simply differing in regard to the one element, the force of which it was proposed to measure. Among the various elements influencing crime, sex has already been shown to be a most important one, as on the aggregate of ages the tendency to crime in the male sex was to that in the female sex, as .2978 is to .0633—in fact, nearly five times greater in the male sex\*. It is not enough to take into view simply the mental and moral conditions of the mind itself, but those conditions in relation to external circumstances and the state of society; and whatever may be the state of education and the natural feelings and passions peculiar to the female mind, sufficient has been shown in the former paper, to prove that the difference in her social position in this country exposes her to less temptations to crime. In like manner does the same evidence prove, that while the state of education remains unaltered or constant in the country, crime may be fluctuating or gradually increasing or decreasing under the influence of the altered external circumstances with which man is surrounded; so also may the education of the people increase and become more general—as appears to be the case from the facts disclosed by the registers of marriage, which show that the proportion of males signing the register with marks has gradually changed from 33.7 per cent. in 1839, to 32.4 per cent. in 1844; while, during the same years, the proportion of male criminals that can neither read nor write has decreased from 33.53 per cent. to 29.77 per cent.; and all this time crime may have likewise increased, but still it will remain a fact, that education counteracts the tendency, so long as the criminal returns show that, everything else being the same, crime is at a minimum where education is at a maximum, and that where education is least, crime is highest. Changes in the political, manufacturing, and commercial aspects of the country—alterations in the police and criminal laws—have all their influence; and although for a period, or even a long series of years, crime may be on the increase, education may still be importantly concerned in the development of crime.

In the former contribution on the subject of Crime in England and Wales, during the years 1842-3-4, the following passage will be found:—

“Nothing has yet been said on the nature and extent of the various descriptions of crimes and offences. In the early part of this communication it was shown, that in investigating the question of crime in its aggregate character, no satisfactory or true results could possibly be obtained, unless the element of age entered into the inquiry. If it be, then, so essential an element in discussing the question of crime in its general aspect, it must be evident that in its specific form there is still less chance of success, when without the means of employing the element of age. It is, therefore, to be lamented, that although in the Home Office Returns the number of criminals guilty of particular offences is given, no mention is made of their ages in connexion with specific forms of crime. This defect might be easily remedied. Local and provincial police-courts and districts have seen the value of such information; and it is to be regretted that the authorities at head-quarters should still be indifferent to the great advantages that must result from affording inquirers into criminal statistics a means of introducing so important an element into their investigations.”

It was not known at the time of writing this paragraph, that the Home Office had actually furnished the information required, respecting the ages of the persons committed for each class of crime, up till

\* See former paper, Tables A and B.

the year 1839; and that in subsequent years the returns have been presented in their present defective state. What could be the reasons for relinquishing their earlier plans, it is difficult to imagine. All the criminal returns for the six years, 1834-1839, have been analyzed, as shown in Tables IV. and V. of the Appendix, for each class of crimes, and the population calculated by the formula given in page 1 of the former paper for each year, and for each term of life, in order to discover the tendency at various ages to particular classes of crime.

These tables explain themselves, being on precisely the same model as those given in the former paper, only that Table V. instead of showing the tendency to crime in the aggregate at each age, points out the tendency to particular classes or kinds of crime.

The following abstract presents the general results arrived at:—

*Ratio per cent. of Criminals to the Population, yearly, at various terms of life, in each class of offences.*

AGES.	Division. (1)	Division. (2)	Division. (3)	Division. (4)	Division. (5)	Division. (6)
12 years and under ....	·00019	·00053	·01259	·00009	·00004	·00008
16 years and above 12	·00811	·01574	·26513	·00108	·00160	·00330
21 years and above 16	·05622	·07613	·59929	·00428	·01208	·03326
30 years and above 21	·06800	·04643	·39109	·00394	·01114	·03798
40 years and above 30	·03757	·01383	·21374	·00191	·00631	·02074
50 years and above 40	·02195	·00510	·12938	·00174	·00401	·01699
60 years and above 50	·01538	·00258	·09136	·00123	·00191	·00825
Above 60 years.....	·00695	·00124	·03908	·00049	·00131	·00367
Total .....	·02411	·01798	·18791	·00161	·00429	·01335

*Number of the Population at various terms of life by which One Crime in each particular class of offences is committed yearly.*

Ages.	Division. (1)	Division. (2)	Division. (3)	Division. (4)	Division. (5)	Division. (6)
12 years and under....	526315·79	188679·25	7942·81	1111111·11	2500000·00	1250000·60
16 years and above 12..	12330·46	6353·24	377·22	92592·59	62500·00	30120·48
21 years and above 16..	1778·73	1313·54	166·86	23364·49	8278·15	3006·61
30 years and above 21..	1470·59	2153·78	255·69	25380·71	8976·66	2632·96
40 years and above 30..	2661·70	7230·66	467·95	52356·02	15847·86	4821·60
50 years and above 40..	4555·81	19607·81	772·80	57471·26	21937·66	9099·18
60 years and above 50..	6501·95	38759·69	1091·57	81300·81	52356·02	12121·21
Above 60 years .....	14388·49	80645·16	2558·85	204081·63	76335·88	27247·96
Total.....	4147·66	5561·73	532·20	62111·80	23310·02	7490·61

It will be recollected that when, on a former occasion, crime was viewed in the aggregate, the tendency to crime at various terms of life was shown to follow a very remarkable law. From the age of 20 it was found that the tendency to crime in the male sex decreases at the rate of 33·333 per cent. for each term of life given in the tables; but, as anticipated, it will now be found that age becomes of still more importance in the investigation, when considering specific forms of crime. Some striking examples of this will be seen by referring to the

preceding abstract, and comparing the results in the different classes at ages "21 years and above 16," with the following terms of life, in which the tendency to crime is

In the class (1) of offences against the person at ages

21 years and above 16 .....	·05622
30   "   "   21 .....	·06800

Difference — ·01178 or + 20·95 per cent.

Again in class (2), offences against property, with violence, at ages

21 years and above 16 .....	·07613
30   "   "   21 .....	·04643

Difference — ·02970 or — 39·01 per cent.

In class (3), offences against property without violence, at ages

21 years and above 16 .....	·59929
30   "   "   21 .....	·39109

Difference — ·20820 or — 34·89 per cent.

In class (4), malicious offences against property

21 years and above 16 .....	·00428
30   "   "   21 .....	·00394

Difference — ·00034 or — 7·94 per cent.

In class (5), forgery and other offences against the currency

21 years and above 16 .....	·01208
30   "   "   21 .....	·01114

Difference — ·00094 or — 7·77 per cent.

It is, therefore, obvious, that the law which regulates the tendency to crime at different ages is not the same in every class. For while in the class of offences against the person, there is an increased tendency at ages "30—21" of 20·95 per cent. above that shown in the preceding term of life, there is in all the other classes a less tendency, varying from 39 per cent. in offences against property with violence, to only 7·77 per cent. in cases of forgery and other offences against the currency. At other ages, like differences will be found. The difference between the tendency to crime in class (2) at ages 40-30 and 50-40 is, 63·12 per cent., but the difference at the same age in class (4) is only 8·90 per cent.

The importance to criminal jurisprudence of a solution of this problem must be evident. No preventive measures can possibly be adopted till the knowledge exists of the particular tendencies to certain propensities and forms of crime at different ages. With a clear knowledge of these, however, the chances of success in averting crime must be greater, as the means are furnished of knowing in what particular sections of the community the strongest tendency exists to specific forms of crime.

On reflection, it will now be seen, with still greater force than formerly, the necessity which exists for a very refined analysis, in investigations on crime, before drawing any conclusions. The importance of determining the rate of crime at the different terms of life, in order to know the relative amount of crime in different districts, as

well as to understand whether crime be on the increase or decrease, has already been shown. It also appears equally important to determine the tendency at the respective ages to the specific forms of crime, otherwise the perturbations of which the various classes are susceptible may vitiate conclusions based on any evidence resting on mere general averages.

In the final column of Table V. will be found the expression for the tendency to crime in the aggregate of those six classes during the years 1834-1839. In this table a peculiarity will be observed in the division of ages, but the population has been determined for the same ages by the methods already pointed out. The present division of ages commenced only with the reports for the year 1842. It will be found that above 20 years of age the amount of crime was less in the years 1834-1839, than in the period 1842-1844, and the following abstract will show the relative amount and tendency to crime at the two periods referred to.

Age.	Ratio per cent. of Criminals in		Excess per cent. of Crime in 1842-4 above 1834-9.
	1842-4.	1834-9.	
15-20 .....	·6841	·7839	- 11·588
20-30 .....	·6952	·5566	+ 19·937
30-40 .....	·3794	·2928	+ 22·825
40-50 .....	·2504	·1725	+ 31·110
50-60 .....	·1694	·1202	+ 29·044
60 and upwards	·0813	·0525	+ 35·424

From the preceding abstract it will be seen, that from 20 to 60 years of age there has been an excess of crime in the period 1842-1844 over that of 1834-1839, varying at the different ages within that term of life from about 20 to 31 per cent.; and it will be found, on referring to page 6 of the former paper, that the tendency to crime in the intermediate period of years 1840-1841 was something like a mean between the results given in the preceding abstract, thus pointing to a gradual increase in the criminal calendar of the country within those periods. One striking feature in the preceding abstract is the fact, that while above 20 years of age there has been an increased ratio of crime within the period 1842-1844, that at the period of life, 15-20, there has been a decrease of crime to the extent of 14·588 per cent. This is contrary to the popular opinion held on the subject; but the former paper also showed that all the facts of the case went to prove that there was no increase of juvenile crime, and that if any change or movement be found in the criminal returns of any particular district, that change will be discovered to be promoted, not so much by fluctuations at the terms of life 10-15 and 15-20, as by the increase or decrease among those persons of more advanced ages. It is thus evident that over a period of eleven years, ending December 1844, instead of there being an increase, there has been a positive decrease of crime among the population at the younger ages.

From the following abstract it will be seen that the great amount of crime is due to one class (3) of offences—that which includes “offences against property committed without violence.”

Ages.	Aggregate Crime during 1834-9.	Class 3 during 1834-9.	Per centage of Crime due to Class 3.
12 years and under.....	·01371	·01259	91·831
12     to     16 .....	·29770	·26513	88·979
16     "     21 .....	·78386	·59929	76·453
21     "     30 .....	·55660	·39109	70·264
30     "     40 .....	·29282	·21374	72·994
40     "     50 .....	·17254	·12938	74·985
50     "     60 .....	·12018	·09136	76·020
60 and upwards .....	·05242	·03908	74·467

This abstract at once points out the necessity for remedial measures being applied to the removal of this class of offences, which consists of about three-fourths of all the crime in the country committed during maturer life. It will be further seen that nine-tenths of the whole amount of crime, by those of 16 years of age and under, is included in the same class; and, on reflection, it must appear evident, that very simple remedial measures may, without difficulty, be applied by the legislator for the removal of the causes, or at least for the prevention of the great bulk of these offences.

The facts brought forward in this and the preceding paper lead to the following conclusions:—

1. That the tendency to crime among the male population at various terms of life varies from 77·02 per cent. at the term of life 20-25, to 16·94 per cent. at ages 50-60; or, in other words, the tendency to crime at one period of life is more than quadruple that at another\*. Age appears to have a similar influence on the tendency to crime in the female sex.

2. That the tendency to crime in the male sex is nearly five times greater than in the female sex. Over the whole male population of England and Wales, at all ages, the tendency to crime is 2978 per cent., and for the female sex it is 6633 per cent.,—that is to say, one in every 336 of the male population is yearly guilty of a criminal offence, and in the female sex one in every 1581†.

3. That in the various districts and counties of England and Wales there is a remarkable difference in the distribution of the population over the various terms of life. In the counties of Anglesea, Carmarthen, and Dorset, the proportion of the whole population alive at the quinquennial term of life, 20-25, is less than 8 per cent.; but in Lancaster, Middlesex, and Monmouth, the proportion varies from 10 to upwards of 11 per cent., and at other periods of life like differences will be found†.

4. It hence follows, that if even the tendency to crime were precisely the same at the respective terms of life in those districts, there would still be, in reference to the whole population, an apparent increase of crime in the three latter counties, from the fact that they contain a greater proportion of their population at the term of life at which the tendency to crime is the greatest. This truth is established

\* See Tables A and B of former paper. Vol. IX.

† See Table E of former paper.

by the facts, that during the years 1842-3-4 the actual proportion of male criminals in England and Wales was 1 in every 336 of the whole male population\*; but if the population, however, had been under the same distribution in regard to age as in the year 1821, the proportion of criminals would have been 1 in 365 only, and if under the same distribution as in the city of Glasgow, crime would appear as high as 1 in every 304†. Again, the difference of distribution of even two districts of the metropolis is such as to produce in Bethnal Green the proportion of 1 in 338, while in St. George's, Hanover Square, the ratio would be as high as 1 in 280‡; manifesting an error, in any method of inquiry neglecting the element of age, of about 21 per cent. An inspection of the results obtained in the former paper will show that a uniform tendency to crime in each county at the respective terms of life would, in consequence of the difference in the distribution of their populations according to age, produce in Anglesea, Cardigan, Carmarthen, Dorset, Merioneth, Montgomery, and Pembroke, the ratio of one crime yearly to every 360 of the population; but in Glamorgan, Lancaster, Middlesex, and Monmouth, the same tendency to crime would produce as high an average as from 1 in 325 to 1 in 313, being a difference of at least 18 per cent.§. It is, therefore, evident, that the element of age is an essential item in every inquiry or investigation into the relative amount and progress of crime in different districts; and on the same evidence the element of sex must appear equally important; and hence calculations in which those elements are neglected cannot be relied on as showing the relative amount of crime in different districts, nor in the same districts at different periods of time: for here we have an apparent difference of crime in some districts to the extent of 20 per cent. above that in others, in which the same tendency to crime has been assumed to prevail, accounted for by the simple fact of a difference in the distribution of their population; and other differences of even greater extent are found to depend on the relative proportion of the sexes in the respective districts. Whence the great necessity in all such inquiries, of having recourse to those elements, in order to determine the relative amount of crime, and the danger of depending on any conclusions arrived at by any methods of inquiry in which they are neglected.

6. That every properly conducted inquiry into criminal statistics, intended to show the relative tendencies to crime in different districts, or in the same district, at different periods, must distinguish the amount and degree of crime in each sex, and show the amount and tendency to crime for each sex and at every term of life for given districts at the respective periods of time||.

7. That the tendency to crime at each successive term of life given in the tables decreases from the age of 20 at the rate of 33·333 per cent. for the male sex, and at the rate of 25 per cent. for the female sex¶.

8. That in some counties or districts, crime is 52 per cent. above

\* See Tables A and G of former paper.

† See Tables A and G of former paper.

‡ See Table G of former paper.

§ See Table G of former paper. Vol. IX.

|| See Tables A and B of former paper.

¶ See Tables A and B of former paper.

the average of the kingdom, while in others it is at least 80 per cent. below the average\*.

9. That in all the agricultural groups of counties there seems to be a remarkable uniformity in the tendency to crime, varying in an excess of crime above the average for the whole kingdom of from 5·3 per cent. to 6·8 per cent.; but in the mining and manufacturing groups of counties, although the whole combined show less than the average crime for England and Wales, still in one portion of the groups there is an excess of 33·5 per cent. of crime; while in another, crime is 52·1 per cent. below the average†; proving that there must be some powerful element in the social and moral state of the people, not eliminated in such combinations, producing this remarkable disparity.

10. That the usual test by which the manufacturing and agricultural counties are determined, may often be neutralized by a corresponding high or low ratio of agriculturists and manufacturers in each: but adopting corrections as in Table L of the former paper, to avoid such errors, and testing the counties in which the most striking differences exist as to their agricultural and manufacturing conditions, it is found that the mere fact of such differences in the habits of the people has little or no influence on the increase or decrease of crime, and offers no solution to the problem of what is that element of feature which produces in one great community an excess of 52·1 per cent. of crime, and in another community reduces crime 33·5 per cent. below the average‡.

11. That by adopting the test of education or instruction furnished by the marriage registers of the country, and further analyzing the groups referred to in the preceding paragraphs, by dividing each in two sections—by the one of which will be represented the population of highest education, and the other the population of least education;—in fact, so analyzing the various districts and groups of counties, that they differ in respect of education only,—it is found, that out of the 22 different combinations formed of the various districts of England and Wales, that in every instance there is an excess of crime where there is the least education or instruction; and comparing the respective sections of each group of counties, it will be seen that there is an average excess of 25 per cent., of crime in the sections of inferior education over that of higher education, and in some districts the excess is as much as 44 per cent.§.

12. That it is hence obvious, that the very small amount of education implied by the test here adopted has a powerful influence on the criminal calendar of the country; and that the introduction of this further element into the investigation of the relative amount of crime, removes many anomalies not otherwise to be understood||.

13. That all the preceding conclusions are arrived at from facts derived from a source partly independent of the criminal population itself; but the present paper furnishes evidences establishing the fact, that invariably, in those districts in which there is an increased amount

\* See Table J of former paper.

† See Table K of former paper.

‡ See Table L of former paper.

§ See pages 235 and 236, and Table N of former paper. Vol. IX.

|| See page 236.

of crime, there is also a higher ratio of uneducated criminals, and in the less criminal districts a less proportion of the criminal population wholly destitute of the rudest elements of education; and, in following up this inquiry, the following remarkable combination of elements determine to prove the great influence of education in the development of crime. The districts of the country in which the general population is the worst educated, the districts in which the greatest amount of crime prevails, and the districts in which there is the highest proportion of uninstructed criminals, are constantly found assimilating; while, on the other hand, those districts which are the best educated, the least criminal, and in which a less proportion of uneducated criminals is found, are likewise found to be identified in the various combinations\*: and hence the great reduction of crime to be justly expected from the general diffusion of education.

14. That the highest proportion of criminals in the male sex wholly destitute of education is to be found in those committed for offences against property without violence—and least in the class of forgery, and offences against the currency; but for the female sex, the lowest ratio was found in malicious offences against property, and the highest in the class of forgery, and offences against the currency†.

15. That the simultaneous increase of education and crime does not necessarily prove that education has no material influence on crime, so long as the criminal returns show that, all other conditions being the same, crime is at a minimum when education is at a maximum, and *vice versa*. Changes in the political, manufacturing, and commercial aspects of the country—alterations in the police and criminal laws—have all their influence; and although for a period, or even a long series of years, crime may be on the increase, education may still be importantly concerned in the repression of crime‡.

16. When viewed in its aggregate character, it is found that at the inferior ages there is a greater tendency to crime than at superior ages; but when viewed in its specific character, it is found that this law does not prevail: for while, in the class of offences against the person, at ages 21-30 there is an increased tendency of 20·95 per cent. above that for the preceding term of life, in all the other classes there is a less tendency, varying from 39 per cent. in offences against property with violence, to only 7·77 per cent. in cases of forgery and other offences against the currency: and at other ages, like differences will be found§.

17. That it is hence evident, that no conclusions, as to the prevalence of crime, can be safely applied to questions of criminal jurisprudence, unless a proper analysis be made for the districts under investigation, as to the tendency which exists to the specific forms of crime—and that for each sex and at each term of life: for here we find, for two terms of life, a difference of 60 per cent. in the amount of crime dependent on the relative prevalence of two specific forms of offences; and it consequently follows that, assuming in different districts the criminal tendencies of the population to be precisely the same, that

\* See pages 142—146, also Tables I. and II. of this paper.

† See pages 147—148, also Table III. of this paper.

‡ See pages 148—149, of this paper.

§ See pages 150—151, and also Tables IV. and V. of this paper.

- (a), the fact of difference in the distribution of the population at different ages will produce an apparent excess of crime, from the circumstance, that in some districts there is an excess of population at that term of life in which the tendency to some peculiar forms of crime is in maximum or in minimum ;—or
- (b), on the other hand, assuming the distribution to be nearly, or exactly the same in two districts, a difference in the tendencies to specific forms of crime may be concealed by the neglect of the element of age or sex, and the districts falsely concluded to be in similar conditions as to their criminal manifestations; and a third error,
- (c), may result from the neutralizing influences of these disturbing causes balancing each other. The excess of population at one particular term of life favourable to the manifestation of a particular form of crime, may be counteracted by an equivalent amount of reduction in the intensity to the development of that specific form of crime; and hence all ignorance of these perturbations, and the remedial measures which a knowledge of them would induce, unless that in criminal inquiries they constitute elements of the investigation\*.

18. That although it has been usual of late to refer to juvenile delinquency as an explanation of the increase of crime in many districts, the facts here presented do not support the supposition. An inspection of the nine groups of combinations represented in Table K. of the former paper, will show, both for the general result, and for each group, that any increase or decrease in the amount of crime, above the average of the country, is not explained so much by fluctuations in the tendency to crime at ages 10-15 and 15-20; as by the increase or decrease of crime at more advanced ages; leading to the conclusion that in the juvenile period of life the tendency to crime is within the influence of more constant laws or elements, and therefore shows less fluctuation than in mature life, when the conduct and disposition of individuals come more under the control of external circumstances. Further, a comparison of the results set forth in Table A. in the former paper, and in Table V. of this paper, shows that, from 20 to 60 years of age, there has been a gradual increase of crime, since the year 1834, of from 20 to 31 per cent., varying with the age; but during the same years there has been at the younger ages, 15-20, a uniform decrease of 14·588 per cent.: thus proving, by the facts of the case, that over a period of eleven years, ending December 1844, there has been a decrease of crime among the population at the younger ages.

19. That to one class of offences—those against property, committed without violence—is due three-fourths of the whole crime of this country; and among the population of 16 years of age and under, more than nine-tenths of all their crimes is due to this single class of offences†.

20. That the nature of these offences obviously places them within the reach of such remedial measures as would certainly, to a great extent, remove them from the criminal calendar, and thus go far toward the prevention of three-fourths at least of the crimes of this country.

\* See Table A and B of former paper, and Table V. of this paper.

† See Table V. of this paper.

TABLE I.—*Showing the Degree of Instruction among the Criminals in those Counties where Crime exceeds the average ratio of England and Wales, for the Years 1842, 3, and 4.*  
MALES.

Name of County.	Neither Read nor Write.		Read and Write imperfectly.		Read and Write well.		Superior Education.		Instruction could not be ascertained.		Total.
	Actual Number.	Prop. per cent.	Actual Number.	Prop. per cent.	Actual Number.	Prop. per cent.	Actual Number.	Prop. per cent.	Actual Number.	Prop. per cent.	
Counties in which the excess of crime is under 15 per cent. ....	Berkshire .....	210	...	531	30	...	1	...	34	...	806
	Hertfordshire .....	304	...	436	30	...	3	...	16	...	789
	Kent .....	827	...	1,550	113	...	7	...	60	...	2,557
	Lancashire .....	3,920	...	4,624	518	...	36	...	186	...	8,584
	Norfolk .....	756	...	1,015	203	...	6	...	28	...	2,007
	Oxford .....	258	...	516	23	...	...	...	24	...	821
	Rutland .....	28	...	52	13	...	...	...	3	...	96
	Salop .....	456	...	693	28	...	3	...	25	...	1,205
	Suffolk .....	517	...	815	134	...	4	...	32	...	1,502
	Wiltshire .....	299	...	839	96	...	15	...	14	...	1,263
Total .....	6,875	35.8	11,071	57.6	1,187	6.2	75	.4	422	2.1	19,630
Counties in which the excess of crime is 15 per cent. and under 30 per cent. ....	Bedfordshire .....	248	...	295	5	...	...	...	3	...	551
	Buckinghamshire .....	304	...	436	42	...	5	...	12	...	739
	Essex .....	741	...	962	56	...	8	...	24	...	1,791
	Hertford .....	243	...	340	9	...	...	...	3	...	595
	Middlesex .....	1,976	...	5,405	1,670	...	29	...	384	...	9,464
	Monmouth .....	933	...	1,371	922	...	2	...	164	...	2,692
	Somerset .....	887	...	1,608	360	...	27	...	101	...	2,983
	Stafford .....	5,332	29.3	10,417	57.3	2,364	71	.4	691	3.7	18,875
	Gloucester .....	732	...	1,519	99	...	26	...	17	...	2,383
	Leicester .....	361	...	769	136	...	6	...	70	...	2,866
Counties in which the excess of crime is 30 per cent. and upwards .....	Warwick .....	564	...	925	159	...	1	...	12	...	1,598
	Warwick .....	853	...	1,315	275	...	29	...	17	...	2,489
	Total .....	3,311	31.6	6,381	724	6.9	71	.7	161	1.5	10,648
	Grand Total .....	15,518	32.4	27,869	4,275	8.9	217	.5	1,274	2.6	49,153





TABLE II.—Continued.

Group of Counties in [section (b)] Table N, former paper.		Number and Ratio of Criminals in the Sections of Higher Degree of Education in the General Community.									
		Who could neither Read nor Write.		Who could Read and Write imperfectly.		Who could Read and Write well.		Of Superior Education.		Instruction could not be ascertained.	
		Actual number.	Per cent.	Actual number.	Per cent.	Actual number.	Per cent.	Actual number.	Per cent.	Actual number.	Total.
Least Agricultural.....	{ Group 1 } Durham, Surrey, Northumber- sect. (b) { land, Derby, Gloucester.....	2,014	28.3	4,553	63.9	538	7.5	16	.2	189	7,310
Greatest " .....	{ Group 2 } Bucks, Lincoln, Hereford, Rut- sect. (b) { land, Berks, Wilts.....	1,413	29.5	3,065	61.1	277	5.8	28	.5	110	4,893
Greatest Manufacturing ....	{ Group 3 } Middlesex, Derby, Leicester, sect. (b) { Warwick.....	3,398	24.9	8,066	59.1	2,120	15.5	61	.15	440	14,085
Least " .....	{ Group 4 } Sussex, Lincoln, Hereford ..... sect. (b) {	1,422	31.1	2,661	58.3	450	9.9	32	.7	56	4,621
Manufacturing interest, 33½ per cent. above the average ....	{ Group 5 } Middlesex, Surrey, Derby, Le- sect. (b) { cester.....	3,140	23.5	8,006	59.9	2,176	16.3	36	.3	456	13,814
Agricultural interest, 50 per cent. above the average....	{ Group 6 } Bucks, Sussex, Lincoln, Hereford, sect. (b) { Rutland, Berks.....	1,164	27.2	2,601	60.8	506	11.8	7	.16	72	4,350
Manufacturing and Agricul- tural interest nearly equal..	{ Group 7 } Dorset, Southampton, Northampton sect. (b) {	1,491	31.4	3,002	63.2	213	5.1	13	.3	100	4,819
Greatest wealth.....	{ Group 8 } Cumberland, Surrey, Westmore- sect. (b) { land.....	880	30.7	1,757	61.4	211	7.4	14	.5	81	2,943
Least wealth .....	{ Group 9 } Bucks, Derby, Nottingham, sect. (b) { Northamptonshire.....	1,071	32.5	2,046	62.1	167	5.1	9	.3	81	3,374
Group in which those signing with "Marks" is less than the average by 25 per cent..		1,826	29.2	3,726	59.6	678	10.8	23	.4	136	6,389

TABLE III.—*Showing the relative degree of Instruction among Criminals in each class of Offences, during the years 1836, 37, 38, and 39. MALES AND FEMALES.*

Division of Offences.	Neither Read nor Write.		Read and Write imperfectly.		Read and Write well.		Superior Instruction.		Instruction could not be ascertained.		Total Number of Offenders.		
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
Div. (1)	1836	419	61	844	101	302	20	48	146	15	1,759	197	
	1837	422	59	709	95	252	6	20	135	20	1,538	181	
	1838	454	59	776	97	276	16	23	143	14	1,672	187	
	1839	438	50	909	108	283	24	21	155	21	1,806	203	
	1,733	229	3,238	401	1,113	66	112	2	579	70	6,775	768	
	27.97	32.81	52.26	57.45	17.96	9.16	1.81	.29	..	..	..	..	
Div. (2)	1836	380	29	686	40	150	2	8	14	1	1,238	72	
	1837	472	33	732	35	117	3	2	6	..	1,329	71	
	1838	510	41	809	33	129	6	1	9	..	1,458	80	
	1839	455	41	767	41	112	2	1	13	..	1,348	84	
	1,817	144	2,994	149	508	13	12	12	42	1	5,373	307	
	34.08	47.06	56.16	48.69	9.53	4.25	.23	..	..	..	..	..	
Div. (3)	1836	4,460	1,257	6,789	1,767	1,386	164	92	14	195	43	12,922	3,245
	1837	5,420	1,556	8,076	1,897	1,506	146	59	2	170	52	15,231	3,653
	1838	5,102	1,420	7,882	2,040	1,469	159	34	4	141	27	14,628	3,650
	1839	5,206	1,526	8,105	2,298	1,594	211	30	4	217	52	15,152	4,091
	20,188	5,759	30,852	8,002	5,955	680	215	24	723	174	57,933	14,639	
	35.29	39.81	53.93	55.32	10.41	4.70	.38	.17	..	..	..	..	
Div. (4)	1836	47	6	76	6	23	..	2	8	..	156	12	
	1837	34	4	45	8	12	..	2	9	..	102	12	
	1838	23	2	47	8	7	..	1	1	..	79	10	
	1839	40	2	35	8	18	..	..	2	..	95	10	
	144	14	203	30	60	..	5	..	20	..	432	44	
	34.95	31.82	49.27	68.18	14.56	..	1.21	..	..	..	..	..	
Div. (5)	1836	65	38	162	30	47	5	11	..	1	285	74	
	1837	94	67	185	48	51	4	7	..	..	337	119	
	1838	87	44	205	66	87	5	6	..	2	387	116	
	1839	80	47	170	50	71	10	6	..	2	329	107	
	326	196	722	194	256	24	30	..	4	2	1,338	416	
	24.44	47.34	54.12	46.86	19.19	5.80	2.25	..	..	..	..	..	
Div. (6)	1836	227	44	411	71	108	8	15	1	127	12	888	136
	1837	242	61	400	68	119	18	8	..	101	22	870	169
	1838	166	35	289	82	83	20	9	..	134	9	681	146
	1839	268	43	537	43	123	14	16	..	157	17	1,101	117
	903	183	1,637	264	433	60	48	1	519	60	3,540	568	
	29.89	36.02	54.19	51.97	14.33	11.81	1.59	.20	..	..	..	..	

TABLE IV.—Showing the Age and Sex of the total number of Persons Committed for Trial or Bailed in 1834, 5, 6, 7, 8, and 1839.

MALES AND FEMALES.

Division of Offences.	Aged 12 years and under.		Aged 16 years and above 12.		Aged 21 years and above 16.		Aged 30 years and above 21.		Aged 40 years and above 30.		Aged 50 years and above 40.		Aged 60 years and above 50.		Aged above 60 years.		Age could not be ascertained.		Total Number of Offenders.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Division (1)	5	3	52	3	466	28	804	82	346	39	175	23	80	10	43	2	253	41	2224	231
	3	1	57	8	339	41	670	65	352	55	149	26	73	12	24	4	123	14	1790	226
	4	..	59	7	364	25	669	64	365	44	136	31	71	6	31	6	120	15	1550	197
	2	..	34	3	301	28	66	66	281	43	110	17	63	4	25	3	112	17	1598	181
	5	..	46	1	339	36	615	67	301	37	141	15	57	5	36	1	132	15	1672	157
Total.....	7	..	42	4	411	39	677	80	313	36	134	17	55	5	36	2	131	20	1806	203
	26	4	290	26	2,220	197	4045	434	1,898	254	845	128	239	42	195	18	871	122	10,789	1,225
	..	..	314	..	2415	..	4401	..	2065	..	920	..	434	..	212	..	..	..	..	..
	13	3	106	2	573	30	537	30	113	4	38	..	10	2	4	..	5	..	1,389	71
	8	..	75	7	545	24	477	26	124	8	27	3	17	..	7	..	6	..	1,286	68
Division (2)	16	..	71	2	478	28	482	23	124	12	40	3	8	2	5	2	14	..	1,238	72
	3	..	107	3	529	28	502	22	134	7	29	5	11	2	3	1	6	..	1,329	71
	16	..	145	12	629	30	485	19	122	13	39	4	8	2	8	..	6	..	1,458	80
	2	..	103	5	499	34	516	29	139	6	40	5	18	2	11	1	6	..	1,348	84
	77	8	607	31	3,253	174	2,989	149	756	50	213	20	72	10	38	4	43	..	8,048	446
Corrected Total.....	78	..	610	..	3,270	..	3,005	..	760	..	214	..	73	..	38	..	..	..	..	..
	310	55	1,699	288	4,203	775	4,019	930	1,822	565	870	245	302	129	179	48	114	24	13,608	2,909
	277	50	1,542	277	4,009	771	3,737	934	1,634	433	764	272	373	124	140	45	78	18	12,554	2,924
	1836	312	51	1,570	3,970	884	3,833	983	1,735	551	781	297	399	147	181	44	141	28	12,922	3,245
	1837	289	51	1,777	3,17	1,034	4,587	1,137	2,108	560	985	302	477	153	236	69	155	30	15,231	3,653
Division (3)	1838	292	49	1,709	3,38	1,045	4,449	1,005	2,110	549	949	342	433	126	223	71	113	23	14,698	3,650
	1839	335	56	1,878	4,354	1,144	4,450	1,228	2,229	630	1,024	359	480	168	222	74	180	47	15,192	4,091
	1,815	312	10,175	1,901	25,593	5,653	25,075	6,317	11,638	3,192	5,373	1,817	2,554	849	1,181	351	781	170	84,095	20,562
	1,832	..	10,271	..	25,742	..	25,310	..	11,747	..	5,423	..	2,578	..	1,192	..	..	..	..	..
	Corrected Total.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

\* The Corrected Total represents, in every case, the number of Male Criminals at each Term, provided the age of every Criminal had been ascertained; and is obtained by the formula given on page 1 of the former paper.

TABLE IV.—Continued.

Division of Offences.	Aged 12 years and under.		Aged 16 years and above 12.		Aged 21 years and above 16.		Aged 30 years and above 21.		Aged 40 years and above 30.		Aged 50 years and above 40.		Aged 60 years and above 50.		Aged above 60 years.		Age could not be ascertained.		Total Number of Offenders.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Division (4)	1834	3	4	4	36	2	56	21	1	15	8	3	1	1	3	1	150	21		
	1835	4	5	38	1	51	21	25	2	21	10	4	3	1	7	1	140	16		
	1836	2	11	6	33	1	51	25	2	25	15	1	8	1	2	1	156	12		
	1837	1	9	3	20	5	40	13	3	13	10	1	4	4	..	5	102	12		
	1838	1	6	1	18	4	26	7	3	13	13	1	4	..	1	5	79	10		
1839	3	1	3	34	1	23	4	16	1	8	1	6	..	1	1	95	10			
Total	14	1	41	19	179	14	248	103	7	71	9	33	2	2	14	2	722	72		
Corrected Total	14	..	42	..	184	..	255	105	..	73	..	34	..	..	15	..	..	..	..	..
Division (5)	1834	2	11	7	72	33	116	52	22	30	15	12	7	5	5	1	301	130		
	1835	1	7	8	30	10	109	50	7	20	6	7	7	6	4	1	279	89		
	1836	..	2	3	96	17	169	48	12	24	6	2	8	4	2	..	285	74		
	1837	1	16	8	89	16	123	48	67	20	26	9	7	7	6	2	337	119		
	1838	3	9	4	102	30	136	38	73	27	35	9	18	5	10	3	387	116		
1839	..	2	16	2	80	25	127	56	20	32	13	7	6	9	3	329	107			
Total	7	5	61	32	518	151	720	346	108	167	61	54	40	40	24	5	1,918	635		
Corrected Total	7	..	62	..	519	..	721	347	..	168	..	54	..	..	40	..	..	..	..	..
Division (6)	1834	4	26	1	248	7	420	183	39	93	19	33	2	13	13	188	1,208	128		
	1835	2	21	..	247	23	480	190	29	72	16	42	16	28	4	4	1,226	133		
	1836	1	9	1	182	14	313	162	45	74	12	34	14	12	3	101	1,042	136		
	1837	2	19	..	218	17	319	155	49	51	23	33	23	11	14	1	888	169		
	1838	..	16	2	124	20	324	129	44	49	26	25	6	11	2	78	870	146		
1839	..	2	20	4	224	16	391	182	23	62	7	46	4	19	1	1,101	117			
Total	11	..	111	8	1,243	97	2,138	992	229	401	103	203	53	97	11	778	5,974	829		
Corrected Total	13	..	128	..	1,429	..	2,458	1,140	..	461	..	233	..	112	..	..	..	..	..	..
Totals	1834	33	63	1,899	305	5,698	875	1,127	609	1,221	304	535	151	247	56	564	18,880	3,571		
	1835	295	51	1,707	303	5,257	890	1,093	533	1,042	514	159	514	212	57	353	17,275	3,456		
	1836	365	51	1,722	315	5,123	969	1,134	628	1,070	369	522	178	295	58	384	17,248	3,736		
	1837	303	55	1,962	334	5,774	1,128	1,322	788	1,271	340	587	172	284	81	356	19,407	4,205		
	1838	317	49	1,933	358	5,562	1,165	1,355	673	1,225	336	545	146	289	77	365	18,905	4,189		
1839	303	61	2,062	402	5,602	1,259	1,421	2,955	716	1,500	402	612	185	298	81	475	19,831	4,612		
Grand Total	1,950	330	11,285	2,017	32,916	6,286	35,215	15,733	3,840	7,070	2,138	3,315	996	1,565	410	2,497	111,546	23,769		
Cor. Grand Total	1,965	..	11,543	..	33,670	..	35,921	16,033	..	7,332	..	3,391	..	1,501	..	..	..	..	..	..

TABLE V.—*Criminal Offenders in England and Wales during the years 1834, 5, 6, 7, 8, and 9, in each Class of Offences, with the Ratio of Crime to the Population at the various Terms of Life, calculated to the corrected Population for the respective periods.*—MALES.

Ages.		Population in the Years 1834, 5, 6, 7, 8, & 9.		Criminals for those Years in each class of Offences.															
				Offences against the Person.		Offences against Pro- perty with violence.		Offences against Pro- perty with- out violence.		Malicious Offences against Property.		Forgery and Offences against the currency.		Other Of- fences, not included in the above classes.		Total of all classes.			
				(1)		(2)		(3)		(4)		(5)		(6)					
		No.	Pr ct.	No.	Pr ct.	No.	Pr ct.	No.	Pr ct.	No.	Pr ct.	No.	Pr ct.	No.	Pr ct.	No.	Pr ct.		
Under 5	1834	993160																	
	1835	1000819																	
	1836	1008533																	
	1837	1016316																	
	1838	1024154																	
	1839	1032053																	
6075040																			
5 to 10	1834	891641																	
	1835	900163																	
	1836	908767																	
	1837	917453																	
	1838	926222																	
	1839	935075																	
5479321																			
10 to 15	1834	806642																	
	1835	816795																	
	1836	827077																	
	1837	837433																	
	1838	848030																	
	1839	858701																	
4994736																			
12 years & under	1834	2368786																	
	1835	2391039																	
	1836	2413551																	
	1837	2435062																	
	1838	2459194																	
	1839	2482350																	
11551202		28	000019	78	000053	1832	01259	14	000009	7	000001	13	000008	1995	01371				
16 years & above 12	1834	624731																	
	1835	634953																	
	1836	641235																	
	1837	649727																	
	1838	658280																	
	1839	666946																	
3873922		314	000611	610	01574	10271	26513	42	00108	62	00160	128	00330	11543	29797				
21 years & above 16	1834	687041																	
	1835	698331																	
	1836	709808																	
	1837	721479																	
	1838	733348																	
	1839	745117																	
4295427		2415	05622	3270	07613	25742	59029	181	00428	519	01208	1429	03326	33670	78316				
30 years & above 21	1834	1020024																	
	1835	1042765																	
	1836	1066014																	
	1837	1089781																	
	1838	1114076																	
	1839	1138915																	
6471575		4401	06800	3005	04643	25310	39109	255	00394	721	01114	2458	03798	36021	55600				
40 years & above 30	1834	871464																	
	1835	888300																	
	1836	906480																	
	1837	924512																	
	1838	942992																	
	1839	961660																	
5495818		2065	03757	760	01383	11747	21574	102	00191	347	00631	1140	02074	16093	29292				
50 years & above 40	1834	671533																	
	1835	682123																	
	1836	692379																	
	1837	703805																	
	1838	714904																	
	1839	726177																	
4191421		920	02195	214	00510	5423	12933	73	00174	168	00401	461	01099	7232	17251				
60 years & above 50	1834	455946																	
	1835	461580																	
	1836	467284																	
	1837	473058																	
	1838	478904																	
	1839	484821																	
2821593		431	01538	73	00258	2578	09136	34	00123	54	00191	233	00625	3391	12018				
Above 60 years	1834	494796																	
	1835	500187																	
	1836	505636																	
	1837	511145																	
	1838	516714																	
	1839	522341																	
3050822		512	00695	38	00124	1192	03908	15	00019	40	00131	112	00367	1601	05248				
Grand Total		44751780	10789	02411	8018	01798	84095	18791	722	00161	1918	00429	5974	01335	111546	24925			

## MISCELLANEOUS.

STATE OF THE PUBLIC HEALTH IN THE LAST QUARTER OF  
THE YEAR 1847.

"THE Quarterly Returns are obtained from 117 Districts, sub-divided into 582 Sub-Districts. *Thirty-six* Districts are in the Metropolis, and the remaining 81 comprise, with some agricultural Districts, the principal towns and cities of England. The population was 6,612,800 in 1841."

57,925 deaths were registered in the last quarter. The average number of deaths deducted from the returns of the corresponding quarter of nine preceding years, and corrected for increase of population, is 46,549. There is consequently an excess of 11,376 deaths in the quarter. The deaths registered in the December quarters of 1845, 1846, and 1847, are 39,291, 53,093, 57,925; the mortality in the first, is to that of the last quarter, nearly as 2 to 3. The mortality, it will be seen in the subjoined table, was below the average in the autumn quarters of the 5 years, 1841—5, and above the average in the 5 years 1838—40, 1846—7.

	1838	1839	1840	1841	1842	1843	1844	1845	1846	1847
Deaths Registered in the Dec. quarters of 10 years .....	40,173	41,740	44,186	39,292	39,662	42,608	44,080	39,291	53,093	57,925
Deaths which would have been registered if the mortality had been uniform, and the numbers had increased from 1838 at the rate of 1·75 per cent. annually.	39,820	40,516	41,225	41,947	42,681	43,428	44,188	44,961	45,748	46,549
UNHEALTHY SEASONS Difference above the calculated number..	353	1,224	2,961	..	..	..	..	..	7,345	11,376
HEALTHY SEASONS. Difference below the calculated number..	..	..	..	2,655	3,019	820	108	5,670	..	..

A slight increase in the mortality was noted in the returns of the June quarter, 1846; the mortality in the following hot summer when the potato crop failed was excessive; cholera and diarrhoea were epidemic: in the autumn of 1846, as well as the winter and spring quarters of 1847, the mortality was still higher; scurvy prevailed in the beginning of the year, but in the summer the public health appeared to be slightly improved. Epidemics of typhus and influenza however set in; and made the mortality in the last quarter of 1847 higher than in any quarter of any year since the new system of registration commenced.

The deaths in the year 1845 were 166,000; in 1847 *two hundred and fifteen thousand*. The excess in 1847 is *forty-nine thousand*; or not less than 35,000 over the corrected average of 1839—45. The districts from which the Quarterly Table is made up, have hitherto returned less than half the deaths in England; but it is not probable that the country districts have suffered to the same extent as most of those in the return.

In London the deaths registered in the quarters ending December 1845—6—7, were 11,838, 13,221, and 18,553, (13 weeks). The greatest number registered in any quarter of the nine previous years, was 14,686 in the severe winter of 1845.

It was shown in the last quarterly report on the state of the public health, that if the chance that a child in the country under 15 years of age will die in three months be represented by 1, the chance that a child under 15 in London will die in the same time is represented by 2. It was also shown that the chance of dying among men above 35 in London, is to that in the country as 3 to 2: and it was remarked that "if the chance of dying is increased from 2 in the country to 3 in London, the liability to suffer from epidemics is raised still more." The truth of this proposition has unfortunately been too soon exemplified. The population was

inadequately supplied with potatoes, and scurvy was prevalent in the beginning of the year. Meat and bread were dear, distress was rife; vagrants flocked in from the country, the poor Irish came to their kindred, the workhouses were crowded. In April and May typhus became epidemic; instead of the average of 34, fifty died weekly; it steadily spread and burnt on until it killed a hundred and eleven victims in a single week. Diarrhœa, dysentery, and cholera had been a little more fatal than usual throughout the year; 17, however, only died of these diseases in the first week of July; the mean temperature of the air was above  $60^{\circ}$ : the number of deaths rose to 38, 47, 67, 125, 128, 188, by the middle of August, and then gradually subsided. Notwithstanding the continued prevalence of typhus and scarlatina, the deaths in the last week of October were only 945; one person died of influenza, 36 of bronchitis, (inflammation of the air tubes,) and 62 of pneumonia, (inflammation of the substance of the lungs). In the three weeks following, ending November 20, the total deaths were 1,052, 1,098, and 1,086; of which 2, 4, and 4, were by influenza; 49, 58, and 61 by bronchitis; 68, 79, and 95, by pneumonia. The wind had generally been blowing S.S.W. and S.W. since the first week of October; the weather was unusually warm; a brilliant aurora was observed, and shook the magnets on October 24; it appeared eight times during the quarter; on Tuesday, November 16th, there was a remarkable darkness; the wind changed to N.W., and amidst various changes still blew from the north over Greenwich at the rate of 160, and 250 miles a day. The mean temperature of the air suddenly fell from  $11^{\circ}$  above, to  $10^{\circ}$  below the average; on Monday it was  $54^{\circ}$ , Friday  $32^{\circ}$ ; the air on Friday night was  $27^{\circ}$ , the earth was frozen; the wind was calm three days, and on Saturday evening a dense fog lay over the Thames and London for the space of five hours. No electricity stirred in the air during the week. All was still; as if Nature held her breath at the sight of the destroyer, come forth to sacrifice her children. On Sunday the sky was overcast, the air damp, the wind changed in the night to S. by E., and passed for four days over Greenwich at the rate of 200 and 300 miles daily; the temperature suddenly rose, and remained from  $2^{\circ}$  to  $9^{\circ}$  above the average through the week ending November 27th: when the deaths of 1,677 persons, 819 males, and 858 females were registered; 771 persons under 15 years of age, 518 aged 15—60, and 388 of the age of 60 and upwards. Influenza was epidemic. On the first week of December *two thousand four hundred and fifty-four* persons died; 1,141 were males, 1,313 females; 1,012 children, 712 persons in the prime of life, 730 of the age of 60 and upwards. On the week following *two thousand four hundred and sixteen* persons died: 1,175 males, 1,241 females; 1,016 under the age of 15; 698 at the age of 15—60, and 702 at the age of 60 and upwards. The deaths in the weeks ending Saturday, December 18, December 25, and January 1, were 1,946, 1,247, and 1,599. 11,339 persons died in six weeks, and altogether the epidemic carried off more than 5,000 souls over and above the mortality of the season. The epidemic attained the greatest intensity in the second week of its course; raged with nearly equal violence through the third week; declined in the fourth, and then partly subsided; but the temperature falling, the mortality remained high not only through December, but through the month of January.

The epidemic was most fatal to adults and to the aged: thus in the three weeks ending November 13, the deaths under 15 years of age were 1,553; in the three weeks of the epidemic ending December 18, the deaths under the age of 15, were 2,846. In the same two periods the deaths at the ages 15—60 were 966 and 1,970: at the age of 60 and upwards 576 and 1,999. The mortality in childhood was raised 83 per cent., in manhood 104 per cent., in old age 247 per cent. From the age of 4 to 25, however, the mortality was comparatively not very much increased; at the age of 10 to 15, the healthiest period of life, it was scarcely increased at all—in girls.

During the 7 years 1838—44 the deaths of males in London were more numerous than those of females in the proportion of 1,746 males, to 1,674 females; in the second week of the influenza epidemic the proportions were reversed, for 1,141 males, and 1,313 females died; in the six weeks ending January 1, the deaths of 5,580 males, and 5,759 females were registered. Looking, however, at particular ages, the deaths in the six weeks under 5 years of age were—2,321 males, 2,009 females; from 5 to 55, males 1,580, females 1,507; 55 and upwards, 1,678 males, 2,241 females. At all ages there are more females than males living in London, at 55 and upwards the males in 1841 were 71,384, the females 90,328; at 75 and upwards, males living 6,788, females 11,147. A disease much more deadly in the

old than in the middle-aged and young people, therefore necessarily increases the total deaths of females, more than the total deaths of males, without for that reason being more fatal to the female than to the male sex. The difference in the mortality of males and females from the epidemic is but slight, and can only be determined by nice calculation—into which I shall not enter here.

Influenza attacked those labouring under all sorts of diseases, as well as the healthy. The vital force was extinguished in old age and chronic diseases. The poison, permeating the whole system, fastens chiefly on the mucous membrane lining the sinuses of the face and head, and the air tubes of the lungs. Hence it is fatal to the asthmatic; the deaths directly ascribed to asthma in October and November were 12 weekly; in the six weeks of the influenza epidemic, 77, 86, 78, 52, 14, 26, besides the numerous cases classed under influenza. 36 deaths were ascribed to bronchitis in the week ending October 30th, and 49, 58, 61, 196, 343, 299, 234, 107, and 138, in the nine following weeks. 62 deaths were ascribed to pneumonia in the same week, and 68, 79, 95, 170, 306, 294, 189, 131, 148, in the nine weeks following. In some of these cases the inflammation specified was the primary disease, in others secondary, and in many it was purely influenza—misreported. There is a strong disposition among some English practitioners, not only to localize disease, but to see nothing but a local disease; hence although it is certain that the high mortality on record was the immediate result of the epidemic of influenza—the deaths referred to that cause are only 1,157; namely in the first week of November, 2, and in the eight weeks following 4, 4, 36, 198, 374, 270, 142, 127; and these include nearly all the cases in which influenza was returned, whether as primary, or secondary in conjunction with other diseases. A similar defect has hitherto been found in the returns of all great epidemics; in 1665, the great plague year, 97,306 burials were returned in the London Bills of Mortality, only 68,596 of which were ascribed to plague. Influenza attacked persons labouring under other zymotic diseases: thus the deaths from hooping cough rose from 12 and 25, to 65 and 71 during the epidemic; the deaths from measles rose from 43 to 96, 89, 69, 75, during the first four weeks of the epidemic, and then subsided to 37 and 58. Typhus which had been fatal to 70 and 80 weekly rose to 132, 136, and 131, in the second, third, and fourth week of the influenza epidemic, and then fell to 83 and 71. Although influenza is not mentioned in these cases it is in others, and there can be little doubt that two or more zymotic processes do often go on simultaneously in the blood and body; a fact of profound interest to the pathologist, and worthy of attentive investigation.

The epidemic was much more fatal in some districts of London than in others. To shew this, I take the deaths in each of the London districts during the six weeks from November 21st, 1847, to January 1st, 1848—and comparing them with the population, obtain the relative mortality. It was at the rate of 46 per annum to 1,000 living in London; the mortality in the seven years, 1838—44 was at the rate of 25 annually to 1,000; the mortality was consequently raised for 6 weeks, by the epidemic, about 80 per cent. above the average. Lewisham, including Blackheath, Sydenham, and Eltham, is one of the healthiest districts in London; the ordinary rate of mortality is 17 annually, during the epidemic it was 27. St. George in the East is one of the unhealthiest districts; the ordinary rate of mortality is 29 in 1,000, the rate of mortality during the epidemic was 73: the increase in Lewisham was 10, in St. George in the East 44; the latter district suffered four times as much from influenza as the former. Excluding districts which contain hospitals or the workhouses of other districts we have the following result.

*Deaths to 1,000 annually.*

	Mean Annual rate of Mortality 1838-44.	Annual rate of Mortality during the last 6 weeks of 1847.	Difference in the Mortality ascribable to the epidemic.
<i>Least unhealthy districts of London.</i> 6 districts of London in which the ordinary mortality of Females is lowest }	20	38	18
<i>Unhealthiest districts of London.</i> 6 districts of London in which the ordinary mortality of Females is highest, see p. 180 .....	27	61	34

The epidemic of influenza killed twice as many people in the insalubrious parts of London, as it did in those less unhealthy: its fatality in Lewisham and St. George in the East was as we have seen 1 to 4. The annual average rate of mortality for London, in 1730—39, was 41 in 1,000; the rate in the 6 weeks of the epidemic of 1733 was 72 in 1,000; the increase was 31 in 1,733; the increase in 1847 was 21.

Let us look to the few country and small town districts in the present return. The deaths in St. Albans, (population 17,000 in 1841,) during the last quarters of the four years, 1844—7, were 94, 75, 91, and 76. The Registrar of the sub-district of St. Albans says, "No epidemic has visited this district." The deaths in the Kendal district (population 35,000) during the last quarters of the four years were 160, 213, 268, and 155; in Anglesea, (population 38,000) the deaths were 155, 163, 206, 158. The Registrar of Llanddau-saint, Anglesea, says, "latterly influenza has been prevalent;" but it was, as has been seen, not very fatal. In the Isle of Wight (population 43,000) the deaths in the December quarter of the four last years were 235, 167, 201, 179. The Registrar of the Godshill sub-district says, "The district would be healthy, but for influenza, which has just made its appearance; but no case has yet been fatal." Epidemic influenza is mentioned in the notes by the Registrars of Maidstone, Brighton, Portsea Island, Northampton, Cambridge, Norwich (mild—"fatal to few"), Yarmouth, Exeter, St. Thomas, (this is the district round Exeter; influenza had just made its appearance at Topsham,) Plymouth, (very fatal in St. Andrew's sub-district, deaths in October 48, November 49, December 103; Charles the Martyr, sub-district, deaths in October 17, November 26, December 63), Redruth, Penzance, Bath, (Lansdown, sub-district, deaths in the three months, 16, 21, 47; the Abbey, 18, 19, 58), Bristol, Clifton, Stroud, Hereford City, ("influenza is just appearing,") Shrewsbury, Walsall, Wolverhampton, Burslem, Birmingham, Aston, Coventry, Leicester, Lincoln, Nottingham, (St. Ann sub-district, deaths in three months 35, 33, 76,) Basford, Derby, Stockport, Macclesfield, Great Boughton with Chester, Liverpool, West Derby, Preston, ("influenza prevailed during the two last weeks of December"), Bury, Bolton, Wigan, Preseot, Chorlton, Manchester (Ancoats, deaths in October 169, November 135, December 270), Salford, Ashton and Oldham, Sheffield, (West sub-district, deaths in October 27, November 27, December 85), Huddersfield, Halifax, Bradford, (Horton sub-district, "no particular disease, except 10 days commencing November, 27, when influenza was prevalent"); Leeds, Hunslet, York, (Walmgate, sub-district, deaths—October 61, November 52, December 99,) Sunderland, Tynemouth, Newcastle-upon-Tyne, Carlisle, ("no epidemic disease prevalent at present in Dalston, Carlisle,") Pontypool, Wrexham, Anglesea. The Quarterly Return includes a few of the country districts; but it is evident that influenza pervaded England generally; in many places it appeared later than in London; some places it has not yet reached at all, or its visitation has been so slight as not to attract attention. The mortality was raised in the unhealthiest towns; but on the whole much less in the mixed town and country districts than in London. The deaths in the December quarters of the four years, 1844—7, were in the districts of London, 13,819, 11,838, 13,221, 18,553, (thirteen weeks):—in the other districts, 30,261, 27,453, 39,872, and 38,320. In the latter districts notwithstanding the epidemic influenza, the mortality on the whole was lower in 1847 than in 1846. The weather, as will be seen, from Mr. Glaisher's lucid statement, (p. 184), did not differ much in any part of country.

*Edinburgh.*—Dr. Stark, to whom Edinburgh is indebted for tables of mortality, states that in that city influenza suddenly attacked great masses of the population twice during the course of November; first on the 18th, and again on the 28th day of the month. It appeared, in both cases, during keen frost, and an excessively damp, thick fog, which came on rather suddenly after a few days of very mild weather. The total deaths returned, exclusive of still-born, were in October 521, November 728, December 1,001. The mean temperature of Edinburgh in December was 39°; the highest 57°, the lowest 21°\*.

Our knowledge of the progress of the epidemic in other countries is necessarily imperfect, as no weekly tables are yet published in any of the great continental cities. We learn however, from the medical and other journals that the grippe which had prevailed for a week was at its height in Paris about December 4th; when one-fourth or one-half of the population were laid up, (Un quart, si non la moitié de la population est couchée.—*Gaz. Médicale*.) It is stated that 50,000 of the in-

\* Report by J. Stark, M.D.

habitants of Madrid were in bed, suffering from influenza, on January 11th. The epidemic still prevailed on the 19th, and was exceedingly fatal. London was probably attacked a few days before Paris; Madrid a month later. In a former epidemic (1782), influenza attacked London at the end of May, France in June, Italy in July, and Spain in August. It travels faster now. The present epidemic reigned in Rennes, October 30, (Prof. Toulmache, in *Gaz. Méd.*) Influenza attacked the crew of the Lousquor French packet in the Mediterranean in October, and was so general that, in difficult circumstances, the surgeon believes the vessel must have been lost. The epidemic did not prevail in Marseilles when the Lousquor left. The Albatros and Nile had cases at sea, but the epidemic was in full force at Toulon and Marseilles when they left port\*. Dr. Laval, a member of the council of health at Constantinople, states that influenza broke out in that city towards the end of August (1847) and prevailed, though not to a very great extent, for a month or six weeks†. A slight epidemic of cholera broke out in October, and still reigns in Constantinople. Respecting the influenza epidemic in Germany, Russia, and Italy, no authentic information has come to hand.

By returns already received at the office of the Director-General of the Medical Department of the Navy, and with which I have been favoured by Sir William Burnett, it appears that epidemic catarrh or influenza prevailed on foreign stations during the year 1847, as under noted. In January, and February—on the coast of Portugal and South coast of Spain. January, February, March—in Newfoundland, and New Zealand. February, March—at Valparaiso. April—Coast of Syria. July, August, September—West Coast of Africa south of the Equator. August—Hong-Kong.

Coryza, gravedo, destillatio, and other forms of catarrh, are described by the ancients. The disease is called *pose* in old English writers from the Anglo-Saxon *gepose* (heaviness, stupor.) Epidemic catarrh is mentioned by Targioni Tozzetti in the *Cronica Meteorologica* of Tuscany under the years 1323, 1328, 1358, 1387. Cullen cites other instances in his *Nosology*‡ under the years 1510, 1575, 1580, 1591, 1658, 1675, 1679, 1708—9, 1712, 1729, 1732—3, 1737, 1742—3, 1748, 1758, 1762, 1767, 1775, 1779—80. Ozanam adds the years 1239, 1311, 1327, 1400, 1403, 1438, 1482, 1505, 1557, 1597, 1627, 1669, 1691, 1695. Some of these epidemics, and others which he describes, were apparently local§.

The disease when severe runs into inflammation of the lungs and pleura, and there can be no doubt that several of the epidemic pleurisies and pleuri-pneumonias of the middle ages were what is now known as influenza. The malignant pleurisy at Venice in 1535, which pervaded Brescia and Lombardy in 1537; as well as the epidemic pleurisy of Switzerland, and Upper Italy in 1551, are examples||. The more celebrated epidemic of 1564 is said to have appeared first in England; to have spread thence to the Netherlands, Holland, and Switzerland. Patients died in 3—6 days, after violent delirium, coma, apoplexy. Vast numbers were victims of the epidemic; and physicians, who at that time began to examine bodies after death, learnt that "inflammation of the substance of the lungs may be combined with pleurisy." Sydenham notices that peripneumonia, and pleurisies committed great slaughter at the end of March, 1665—the year of the great plague¶. The winter had been excessively cold, and with a dry frost lasted till spring; a sudden thaw took place in March. Influenza was epidemic in England in 1657; it broke out in April, (*Wills de Febribus*.) Influenza described tolerably well by Sydenham as, *Tusses epidemicæ anni 1675, cum plenitudine et peripneumonia supervenientibus*¶, and distinguished by him from pure pleurisy, spared scarcely anybody; attacked all ages and temperaments; and seized whole families together (*integras simul familias pervadentes*). It was dangerous. The previous years 1674, 1675, are referred to as a period of great dearth; the harvest of 1673 proved defective; and wheat, which was 36s. per quarter on Lady-day 1673, was 64s. on Lady-day 1674.

\* Bull. de l'Acad. Royale de Méd. T. 13. n. 12. 13. Mem. from Dr. Renault, Surgeon of the Lousquor.

† Letter dated 25 Nov. 1847. in the Gazette Médicale.

‡ Art. 39, Catarrhus acontagio.

§ Histoire Méd. des Maladies épidémiques, tome, page 93—218.

|| Sprengel's Histoire de Méd., vol. iii. p. 88. And authors cited.

¶ Syd. Opera Obs. sect. 2, cap. i.; sect. 4, cap. v.

The epidemics of 1709 and 1729—30, in Germany appear to have been well described by Hoffman. Epidemics in 1728, 1733, 1742, 1758, 1762, 1775, 1782, 1788, 1803, 1831, 1833, and 1837 have been mentioned, several have been fully described by English writers. An abridged account of them is given elsewhere from the original accounts. The symptoms in these epidemics only differed in severity, and from complications with other maladies. (*See page 173.*)

Influenza, like small pox, probably always exists; in ordinary circumstances it is confounded with inflammation of the air tubes, yet in London from one to five deaths have been directly referred to it, nearly every week since the new London Tables were published. Like other zymotic diseases it becomes, at intervals of some years, epidemic; that is, it attacks the people generally of all classes. Its epidemics are distinguished by the numbers they assail; by affecting the same persons more than once; by being most fatal to the aged, of both sexes, and therefore, where there are more old women than old men, causing the deaths of females to exceed those of males during their prevalence; by great differences in the severity and fatality of their attacks; by the rapidity of their course, and passage from place to place. After the mortality they occasion becomes apparent in London, it attains a maximum in the second or third week; and the mortality falls to the average in the sixth or seventh week. Influenza appears to be generated in ill-organized camps, in crowded, ill-cleansed cities; and to be most fatal among people who have for some time before been depressed, ill-fed or ill-supplied with vegetables, as after hard winters and in war\*; it rages in cold, hot, or moist and dry weather, but most frequently breaks out after a thaw, or with violence after a fog, generally the result of cold streams of air mixed with warm air—and a calm. The saturation of the atmosphere favours the transformation of all organic matters; and those of a zymotic character among the rest. Extreme cold only, never raises the weekly mortality in London above 1,500; extreme heat still less; intermediate changes affect the mortality but slightly in ordinary circumstances; November fogs occur every year without giving rise to influenza; in November, 1847, the weather was nearly the same all over England, yet influenza did not break out simultaneously. When once generated the epidemic spreads through the air. The great epidemics generally travel from (1) Russia, over (2) Germany, (3) Denmark, Sweden, England, France, (4) Italy, Spain—in from three to six months; and then reach America. Influenza is often associated with other epidemics. It appears to have preceded, or accompanied the plague, in the black death of the fourteenth century†; it preceded the great plague of London (1665); it followed epidemic typhus in London 1803, preceded it in 1837, occurred in the midst of the typhus epidemic of 1847, preceded and followed the epidemic cholera in 1831—2—3. It carries off asthmatic persons, and those suffering from chronic diseases: it affects those labouring under other zymotic diseases; in the healthy it quickens the seeds of other maladies, particularly of the lungs. The fatality and duration of attacks vary with age. In some of the late epidemics 2 in 100 cases attended by medical men are said to have died‡; if this was the rate of mortality in London, for 5,000 deaths there must have been 250,000 cases of sickness of not less than seven days' duration. This would be

\* “Morbi præsentēs à præteritâ temporum conditione fluunt; accipiunt verò etiam differentiam à conditione præsentis; quare utriusque oportet habere rationem.” The first part of this profound Hippocratic aphorism, which applies to revolutions as well as epidemics, is often overlooked.

† See Hecker (Epidemics of middle ages.) The symptoms were not as he assumes, those of simple bubo plague. The pulmonary symptoms are always dwelt on by the contemporary writers: and Fracastorius referring to the Black Death, specifies them exclusively:—

Insolita exarsit febris, quæ pectore anhelò,  
Sanguineum sputum exagitans, (miserabile visu!)

Quartâ luce frequens fatus perdebat acerbo.—Fracastorius, *Symph.* Lib. 1, v. 189.

‡ See a return by Dr. Bain of the mortality at *different ages* among 317 persons, and a lucid description of the epidemic of 1837, as it appeared in London; British Annals of Med., Vol. I., p. 265; and the able Report on the Influenza of 1837, by Prov. Med. Assoc. Trans. Vol. VI. Data might now be procured for determining the exact mortality at different ages of complicated and uncomplicated cases.

little more than one in eight of the population; but nearly all were affected more or less; and without taking slight instances it is probable that not less than 500,000 persons in 2,100,000, suffered in London from the epidemic of 1847.

The English physicians of the 18th century agreed in pronouncing influenza contagious. By this they did not mean that it was propagated by contact, but that it was introduced into cities, institutions, and houses in England by persons actually affected by the disease. This notion is however too exclusive; the word "contagion," applied to influenza or cholera, is apt to mislead, and to have practically a bad effect. When people ask if a disease is contagious, they generally mean, "Are we more likely to have influenza or cholera if we touch, or go near persons labouring under these diseases?" Now if the matter of contagion is very diffusible, and is distributed equally through the room, the house, the street, the city in which a patient is lodged, no one living in the house, street, or city is much more likely to be infected if he approach the sufferer, than if he remain in absolute solitude, shut up like the grocer of Wood Street in the plague. The matters which excite influenza and cholera are evidently highly diffusible; in a few days it spread all over London, it met you everywhere; nobody, therefore, has attempted to show that medical men, nurses, or others in attendance on the sick, suffered more than other people. If such should ever be the case either in the influenza or the cholera epidemics, it will be in rare circumstances, and should never deter the most timid from discharging their duties to the sick.

The earth, it is well-known, is surrounded by an atmosphere of organic matter, as well as of oxygen, nitrogen, carbonic acid, and watery vapour. This matter varies and is constantly undergoing transformations from organic into inorganic elements: it can neither be seen, weighed, nor measured. The chemists cannot yet test its qualities. Liebig, with all the appliances of the Giessen laboratory, cannot yet detect any difference between the pure air of the Alps, and the air through which the hound can tell a hare, a fox, or a man has passed; or the air which observation shews will produce small pox, measles, scarlatina, hooping cough, dysentery, cholera, influenza, typhus, plague. These matters may either be in a state of vapor, that is elastic, or inelastic; or like water, they may exist in both states. They are most probably in the state of suspension; hang, like the smoke in cities, over the places in which they are produced, but are spread and driven about like vesicular water in clouds. A stream of aqueous vapor of the same elasticity from the Atlantic, passing over England is, in one place, perfectly transparent; in another, mist; in another, rain: so clouds of infectious matter may fleet over the country, and in one place pass harmless by, in another (as influenza in London), destroy thousands of lives. The emanations from the living, the graves, the slaughter-houses, the heaps of filth rotting, the Thames—into which the sewers still empty—raise over London a canopy which is constantly pervaded by zymotic matters; in one season this, in another that, preponderating; and the epidemic influenza may easily be conceived, either to have broken out spontaneously, to have been conveyed here by ships, or to have been carried over here by the winds;—as the cases of the Indianan infected in the Chinese seas, our own fleets, and the Lousquor in the Mediterranean—seem to imply that *influenzine* may be carried great distances over the ocean, from the place of its origin.

Proinde ubi se cælum, quod nobis forte alienum est,  
Commovent, atque aer inimicus seipere capit;  
Ut nebula ac nubes paulatim repit, et omne  
Qua graditur, conturbat et immutare coætat;  
Fit quoque ut, in nostrum quum venit denique cælum,  
Corrumpat, reddatque sui simile, atque alienum.

The zymotic hypothesis, here so well stated, explains the phenomena to a certain extent. Still epidemics afford a vast field for research; for much remains to be investigated.\* The mariner, however, steers his ship without knowing whence the winds come, whither they are going, or why they are blowing; so, as the returns adduced above, establish beyond a doubt, the fact that influenza was four times as

\* The inquiry would be greatly facilitated if such meteorological returns as the Astronomer Royal now supplies, and weekly tables of the causes of death, were published on a uniform plan in Paris, Berlin, Stockholm, Petersburg, Moscow, Vienna, Venice, Rome, Naples, Madrid, Lisbon, Cairo, Constantinople, and Calcutta.

fatal in one part of the population of London as it was in another, and that it is much more fatal in a part commonly insalubrious than in a part usually healthy, the course to be pursued is plain. If the means which improve the public health are applied with intelligence and energy, the general mortality can be reduced; and the ravages, either of any future influenza, or of the coming cholera, can be rendered inconsiderable.

The piety of the ancients, and of our ancestors made them consider all plagues the immediate visitations of God's wrath\*. And there can be no doubt, that though as affecting individuals there is nothing now judicial in plagues; they are the results of great national violations of the laws by which the Almighty is pleased to govern the universe. It has been shewn, year after year, that the impure air of London destroys thousands of lives—that it makes epidemics fatal; the causes of the excessive mortality have been pointed out; and it has been proved that they admit, to a considerable extent, of removal. Yet the efforts of Her Majesty's Government to introduce sanatory measures were strenuously opposed up to the close of the last session of parliament. The population of London was left at the mercy of any epidemic that should break out in any part of the world. During six weeks influenza interrupted business, afflicted hundreds of thousands by sickness, implanted fatal diseases in the breasts of many, and destroyed five thousand of the inhabitants! Are the men who opposed sanatory measures, and declared so loudly, that the "City of London for health, cleanliness, effective drainage, lighting, and for supply of water to its inhabitants, cannot be surpassed," satisfied? or will they fight against the public good, till cholera drive away their best customers, and decimate their own families? Let us hope that, instead of pursuing such a course, they will assist in supplying London with the necessities of city life, which they have enumerated, and which they now know are wanted.

#### PREVIOUS EPIDEMICS OF INFLUENZA IN ENGLAND.

1728, an epidemic catarrh prevailed in the beginning of January†. 1727-9, was a period of some dearth; wheat rose from 4s. to 8s. a bushel. The winter of 1728 was almost as rigorous as that of 1709, when the Influenza broke out in Frederic's new city of Berlin.

1733†. Influenza invaded the northerly parts of Europe before the southerly; was in Saxony, November 26, and lasted in its vigour fourteen days; was earlier in Holland than in England; in Edinburgh than in London, where it lasted in its vigour from about the end of January for about three weeks; the bill from February 3-10, contained in all 1,588 deaths, being higher than any since the plague. This is equivalent to 5,304 deaths in the present population (2,100,000), for the population in the bills then was about 650,000. The mortality in 1733 was nearly double that in the epidemic of 1847. The deaths in the three years, 1731-2-3, were 25,262, 25,358, [29,233,] according to the London Bills. The price of wheat was low in the three years, 33s., 27s., and 28s. a quarter at Eton. The epidemic began in Paris about February 1, and lasted till the beginning of April. It raged in Naples and Southern Italy in March and April. It was four months in passing over these parts of Europe. Huxham, writing at Plymouth, says it seized upon rich and poor; scarce any escaped, old or young, strong or infirm, either in the town or country. It was in Cornwall in January, but attacked Plymouth on February 21. It was a Saturday, on which a very great number were, as it were, suddenly seized; the next day an infinite number felt it, and by the 29th of March everybody everywhere. Few died at Plymouth, and those were chiefly infants and old asthmatic people. In 1728 and 1733, a most vehement cough seized almost all the horses about a month or two before it attacked mankind.--(*Huxham*.) Under 9 Geo. I. (1722-3), the workhouse system came into operation, and many parishes farmed out their poor at low rates. The Persians under Kouli-Khan defeated the Turks in 1730.

1743†. Another epidemic raged through all Europe in 1742 and 1743; the disease obtained the name of Influenza;—*per totam Europam hoc vere subnomine Influenza*, are the words used by Huxham†; hence the learned Sprengel is mis-

\* "Morbos tum ad iram Deorum immortalium relatos esse."—*Celsus*.

† Arbuthnot on Air, p. 193. Huxham de Aëre, An. 1728, 1733, 1743. The dates given in O. S. are converted into new style.

taken when he says that the disease was first called influenza in 1762\*. At the end of 1741 remarkable auroras were visible. In February, 1742, Influenza became epidemic in Saxony; it was at Milan in November, Venice in December, France in March, 1743. In the spring of 1743, it increased the funerals in London to 1,448 in one week. The burials in London in the six years 1739-44 were 25,432, 30,811, 32,169, 27,483, [25,200,] 20,606. The winter of 1739-40 was one of extraordinary severity and duration; coals were 2s. a bushel, water dearer, bread was dear, there were riots. Fever appears to have been epidemic; at the beginning of 1742 the assize of wheaten bread was 5½d., at the end 4¾d. the quartern loaf. This was cheap at that time. The plague swept off 50,000 of the inhabitants of Messina in 1743.

The four years 1739-42 were passed in cruel destructive wars, waged by Nadir Shah, Kouli Khan, and the Turks in Asia; Frederick, Maria Theresa, Louis XV., in Germany; the Swedes, the Russians, and the Turks, in their own dominions; Spain and England, in America. Vernon and Wentworth were ordered to return in September 1742, after the disastrous expedition of Carthagea; Anson was away on his fatal but not unfortunate voyage round the world.

1758. The summer and autumn were warm and dry, the wind easterly, the epidemic influenza made its appearance in Edinburgh in September, was very general in October, at the end of which it began to decline. It did not appear at St. Andrews until October 10, nor at Inverness until the middle of the month. It was most fatal at Dundee, Perth, and Glasgow†.

1762. Sir George Baker commences his relation by saying, that on April 4th, three persons were attacked in the same house by the same disease; and that by April 24th it had spread through the whole of London. It attacked all indiscriminately, and was fatal to the aged, and particularly to those who were asthmatic. The burials in the bill for the week ending May 4, were 467, and for the weeks following, 626, 750, 659, 516, 504. The burials in each of the 5 years, 1760-4, were 19,830, 21,063, [26,326,] 26,143, 23,202. Influenza raged in Warsaw at the end of February, (the deaths from 30-40 rose to 150 weekly;) at Magdeburgh in April, Hamburg in the beginning of April, Alsace in June, in the Mediterranean among British sailors in July. It was more fatal in Venice than elsewhere. Paris was not visited. It was unknown in Britain until it invaded London; and in many cities, notably in Norwich, Lincoln, Leicester, Exeter, those first attacked were strangers lately arrived from London. A dysentery followed in July, and is described by the same author‡. The war with France ended in the peace of Fontainebleau, November 3.

1767. Dr. Heberden mentions an epidemic cold, resembling that of 1762 in London, in June and July, when it entirely ceased. It brought on anginas, pleurisies, and peripneumonias. Both sexes and all ages were attacked. It occurred in other parts of England about the same time. The season preceding this was remarkably cold, while that in 1762 was remarkably warm§.

1775. Dr. Fothergill states, that the influenza appeared about the beginning of November. Some, in addition to the common symptoms, had diarrhœa. The mortality was trifling considering that so many persons were attacked. Horses and dogs were much affected by the complaint. Sir John Pringle had sore throat himself, and no cough. He met with similar cases. He heard of this complaint in France, Italy, and the Low Countries, and inferred, with Sir G. Baker, that the "sensible qualities of the air had most probably no share in producing this complaint." Dr. Heberden saw the first patient on October 28th, and at the end of

\* It was called *grippe*, (which is "whim," in French—and also suggests *gripper*, to grip, to seize,) in Paris during this epidemic; it had formerly been called *coqueluche*, ("a cowl,"—also "the reigning fancy,") and in some of the epidemics had been apparently confounded with whooping-cough. The epidemic has hitherto been the occasion of *bon mots* for our *spiritual* neighbours; it will be well worth the while of the public, even for the sake of change, to look at it seriously now, and to support the able men in France, who think that Paris would be all the merrier for being clean and healthy. In the sixteenth century, influenza was called "the new acquaintance" in Edinburgh, at the Court of Queen Mary.

† Med. Obs., Vol. II., Comm. by Dr. Whytt, Dr. Alves. Dr. Simpson.

‡ De Catarrho et de Dysenteria. auct. G. Baker, Lond. 1764.

§ Med. Trans., Vol. I., p. 437.

three weeks few were attacked who had escaped it up to that period. Two persons had eruptions like scarlatina. It "did not kill, but hastened the death of those who had other complaints." Sir George Baker saw it first about October 20th. Dr. Haygarth, of Chester, remarks, that "it assumes a milder form in warm weather;" Dr. White, of York, that the epidemic "was checked by severe frost and snow"\*. The burials in London were 20,514 in 1775, which was below the average of that period. This was towards the commencement of the American war.

1782. This epidemic was reported on by a Committee of the College of Physicians, and by a great number of medical men all over the country†. Influenza in September, 1780, broke out in an East Indiaman sailing from Malacca to Canton, where it was raging violently at the same time that they had it on board. It broke out in the British army at Negapatam in November, 1781, (Coll. com.) It prevailed at Moscow in December, 1781, and January, 1782; at St. Petersburg in February, 1782. It was traced to Tobolski, and supposed to have been brought from China. It reached Denmark at the end of April; many died of it at Copenhagen before May 11th.—(Dr. Gray.) It was in Scotland and Ireland later than in England (June); France, in June and July; Italy, in July and August; Portugal and Spain, in August and September; afterwards in America.—(Dr. Grant.) It was most prevalent in London in the fourth week of May. Dr. Grant thinks that it first prevailed in London; the Committee of the College are uncertain, and say that it did not observe any regular progression from any one point of the compass to another. They note, however, that it appeared at Newcastle-upon-Tyne at the end of April, and raged in May and June; in London, May 12-18; Norwich and Bury, the middle of May; Hadleigh, in May, but was worst in June; Kingston and Guildford, May 20; Portsmouth, in May; Oxford, the third week of May; Chester, May 26; Plymouth, May 30; and Cornwall (West), May 19; York and Liverpool, in June; Edinburgh, in May; but not at Musselburgh, within five miles of Edinburgh, until June 9; nor at Glasgow until June. It appeared earlier in towns than villages, in villages earlier than in detached houses. Dr. Parr, of Exeter, states, that the epidemic first appeared in Devon May 23, was prevalent in June, disappeared in July, lasting in the county about seven weeks. Dr. Scott says it was first observed in Northumberland on June 1, and then spread all over that county: it was fatal. In the beginning of June it affected the whole of the regiment in the castle of Edinburgh within a few days. The disease was almost universal in London, four-fifths of the people had it; few died, except the old and asthmatic. It seldom held any one more than a fortnight; some had three or four relapses. It generally went through whole families, seizing all simultaneously; in some instances, however, portions of families escaped. Of 700 boys at Christ's Hospital, only fourteen had it, and those not severely. Three families, consisting of seventeen persons, arrived on the same day at an hotel in the Adelphi, all in perfect health; the next day they were all affected with symptoms of the reigning disease. In an hospital containing 170 persons, more than 100 were attacked within twenty-four hours; few escaped afterwards‡. A serjeant of the 10th Foot Grenadier Guards, visited London on furlough when the disease raged there. He returned in a few days to St. Albans affected, and communicated the disease to the people in whose house he had his billet. It was the first appearance of the disease there, and thence spread rapidly all over the town§. In this case much would of course depend on the care and judgment of the observer. Two Hanoverian regiments which arrived from Minorca on July 23, at Plymouth, where influenza had ceased for ten or fourteen days, had nothing of the influenza before or after their arrival. On the other hand, a family who arrived in England from the West Indies in September, was attacked by influenza in October. Carmichael Smith observed petechiæ and gangrene in two fatal cases, others terminated in malignant fever. Mr. Jacob met with erysipelas of head, abscesses in various parts, parotid and axillary, military eruption, pleurisy. In Cambridge it had a putrid type, with delirium. Some died suddenly, some had diarrhœa.—(Dr. Macqueen.) All agree in calling it a universal

\* Med. Obs. and Enq., by a Soc. of Physicians in Lond., 1775. Queries were circulated by Dr. Fothergill.

† Med. Trans., Vol. III., p. 54, and Med. Comm., Vol. I., p. 2.

‡ Med. Trans., Vol. III., p. 59.

§ Dr. Hamilton, Mem. Med. Soc. of London, 1782.

disease. It is worthy of remark, that in March, 1781, a distemper broke out among horned cattle, which were directed to be killed and buried, by order of Council, to prevent infection. The Gazette of August 27, 1782, contains dreadful details of the ravages of plague at Constantinople. Sir G. Baker observed, that influenza was more fatal in France, Holland, and Germany than in this island. The Bills in London were not much swollen. The burials in four weeks ending May 28, were 299, 307, 336, 390; in five weeks ending July 2nd, 385, 560, 473, 434, 296. Neither the mortality of London nor of England was increased in 1782, above the average of the period; the burials in London, 1780-83, were 20,517, 20,709, 17,918, 19,029; in all England, 191,736, 195,902, 187,152, 188,264. The inefficiency, however, which it caused may be conjectured, from its effects in the fleets employed at the close of the American war.

On the 2nd of May, 1782, Admiral Kempenfelt sailed from Spithead with a squadron of ships under his command, of which the *Goliath* was one, whose crew was attacked with influenza on the 29th of that month; the rest were affected at different times; and so many of the men were rendered incapable of duty by this prevailing sickness, that the whole squadron was obliged to return into port about the second week in June, not having had any communication with any shore, and having solely cruised between Brest and the Lizard. The gallant Kempenfelt went down in the *Royal George*, August 30th of the same year.

About the 6th of May, Lord Howe sailed for the Dutch coast with a large fleet under his command; all were in perfect health towards the end of May. The disorder first appeared in the *Rippon*, and in two days after in the *Princess Amelia*; other ships of the same fleet were affected with it at different periods, some indeed not until their return to Portsmouth about the second week in June. This fleet also had no communication with the shore until their return to the Downs, on their way back to Portsmouth towards the 3rd and 4th of June.

In 1788, there was an epidemic. It raged in Paris in July, Vienna in November. Dr. Willan, in his Reports for 1797 and 1800, mentions epidemic catarrhs; which he says were improperly termed influenza by many practitioners—as they were not “infectious,” nor general.

In the beginning of December, 1799, influenza became epidemic in Moscow, and soon after that at Petersburg. In January, 1803, it was epidemic in Paris.—(Ozanam.)

1803. Dr. Andrew Duncan, Edinburgh, met with cases of influenza on February 10; it was very common in March, contagious, not very fatal. He says it was common in London, February 3; its progress from Paris to London, London to Edinburgh, and from Edinburgh is a proof that it is contagious. Dr. John Scott says that it appeared at the end of March in the Isle of Man, it attacked patients already confined to their bed; it promoted phthisis, induced miscarriage. At Bristol, Dr. Carrick says it was provoked by exposure to cold, and sharp east winds, prevalent at that time, March. There had been a scarcity in 1800, and 1801; a famine and typhus followed. The annual deaths in London 1799-1804 were 18,134, 23,068, 19,374, 19,379, (19,582), 17,038. The annual rate of mortality among females in all England was 2.62; 2.52; 2.51; 2.19, in the four years 1801-4; after the year 1803 a remarkable decline in the general mortality of the country took place; and this was only disturbed by higher rates of mortality than 2.2 per cent. in 1807, 1808, 1810, 1825, 1826, until 1831.

Bateman, in his Reports, extending from 1804 to 1816, noticed, in the three months ending February 1813, cases resembling the commencement of the epidemic influenza. The winter of 1814 was the severest since that of 1794-5; a dense fog in December 27, 1813, was followed by fog, snow, and frost; in January, a partial thaw occurred, then the Thames was frozen over in February, and great multitudes were entertained in booths on the Thames. On many days the temperature was as low as 15°. The frost suddenly disappeared in March 20. About 200 of the dispensary cases assumed the form of acute catarrh; many were entered as catarrhal fever, 50 put on the character of the most active pneumonia\*.

1831. An influenza epidemic began in London about the middle of May, and continued during June and a part of July, under very hot though damp weather†. The burials in the London Bills of the Parish Clerks, now become very defective,

\* Bateman's Reports, pp. 212, 226, 232.

† Dr. Holland's Medical Notes, p. 200.

were 21,645, and 25,337 in the two years 1830, 1831; the mortality in the whole kingdom was 2.09, and 2.25 per cent. in the same years. The Polish insurrection broke out in November, 1830; Warsaw capitulated in December, 1831. Cholera raged in the armies in 1831; and was preceded by influenza. Cholera broke out as an epidemic in Sunderland, October 1831; the deaths of six persons were ascribed to it in the London Bill for the week ending February 14. Cholera raged with considerable violence in March and April for 9 weeks, subsided in May and June, and broke out a second time at the end of June, raging with considerable violence for 14 weeks, through July, August, and September. No cases were returned in February, March, April, May, 1833.

1833. "Influenza" broke out as an epidemic in the spring. The word first found its way into the Bills of the Parish Clerks for April 30, 1833. The burials returned for the eight weeks ending April 9, to May 28, were 321, 587, 796, 961, 940, 874, 575, 311. The cause of the excess in the mortality was influenza; to which, however, only 89 deaths were directly ascribed. "It spread over every part of Great Britain and Ireland during the spring of 1833, after having previously appeared in Russia and the northern parts of Germany, inflicting great mortality in every part of its course\*." Cholera broke out in London again in July, epidemically, and prevailed through August and September.

1837. Influenza was epidemic during the month of December, 1836, in Russia, Sweden, and Denmark. In Copenhagen, 30,000 persons were under the disease at one time (Dr. Otto). In Scotland it was observed earlier than in England. It had been prevalent a fortnight in London before it reached Brighton. It appeared also in Lancashire, Cheshire, and Gloucestershire, from 7 to 14 days later than in London. Though very general, some places in the neighbourhood of infected places seemingly escaped. Dr. Holland, from whom this account is taken, goes on to say:—

"The epidemic showed itself in Paris about a month later than in London, having previously appeared at Calais and other intervening places. I saw patients who, on their journey from Paris to London, had come upon an infected town, and been suddenly seized with the malady. At Paris it was stated to have affected at least half the population, but seemingly with less mortality than in London (?). The epidemic spread gradually over other parts of France. About the end of February it affected the northern coast of Spain, the more conspicuous there from its influence on the events of the civil war, then raging in Biscay and Navarre. Almost at the same time it appeared at Lisbon—a new occurrence in that city—spreading successively to the several towns which lie upon the Tagus, even to the Spanish frontier. Dr. Leitao, who has narrated its progress to Portugal, seeks to show that it is contagious, and was brought directly from England to the British squadron in the Tagus, in the vessels of which it first appeared. The same idea prevailed in Biscay as to its manner of importation. The disease reached Madrid about the end of March, and prevailed there the whole of April.

"In Germany, the influenza appeared at Berlin in January, affected Dresden somewhat later, and Vienna and Munich a fortnight after Dresden. At Hamburg, where it appeared in the first days of January, Dr. Rothenburgh states, that more than half the population was attacked. I do not possess any information as to its progress in Italy. In Malta it first shewed itself about the 1st of June.

"A remarkable fact is, that an epidemic, having the characters of the influenza of the northern hemisphere, prevailed at Sydney and the Cape of Good Hope in the latter part of 1836; the time thus corresponding with its earliest appearance in the North of Europe, though under a date of season wholly different. Sir John Herschel informs me, that the weather was warm and apparently genial, at the time when almost every individual in the Cape District was suffering under the epidemic. The malady spread up the country as far as Gnadenthal, producing there considerable mortality in the Hottentot population†."

Cholera was epidemic in Germany, but not in England, during 1837. Typhus was epidemic in England, and the mortality of females in 1837‡ through the country

\* Medical Notes by H. Holland, M.D., 2nd ed., p. 196.

† Medical Notes, by H. Holland, M.D., pp. 198-9.

‡ The mortality of females is taken in these comparisons extending from 1801-37. The male population—on account of the military—could not be so accurately determined.

was 2·52; or considerably higher than it had ever been since 1801. The mortality in the year 1832, when cholera was epidemic, was only 2·42 per cent.; in 1833, when cholera and influenza were epidemic, it was 2·30 per cent. The new system of Registration came into operation in July, 1837; and the mortality of females never exceeded 2·10 in any of the eight years, 1838-45; except in 1840, when it was 2·20, and in 1838, when it was 2·14 per cent. Influenza was slightly epidemic from February 20th, to April 24th, 1841; but the weekly deaths by the new tables never exceeded 1,079, and ranged from 780 to 1,079, during that time. Influenza prevailed to a slight extent at the end of 1846 and the beginning of 1847.

Huxham and Arbuthnot described the great epidemic influenza of 1733; we take the following passage from Arbuthnot, as the account is, in a popular style.

XI. "There have been of late, two remarkable instances of the influence of the air in producing an epidemical disease, perhaps over the greatest part of the surface of the earth; the first happened in the year 1728, the last in the latter end of the year 1732, and beginning of 1733; which being the more recent and remarkable, I shall give a short description of it, till a more particular one can be procured from the collected memoirs of the several countries which it invaded, of which I have seen only a few.

XII. "The previous constitution of the air was in England, and in the greatest part of Europe, a great drought, which may be inferred from the failure of the springs, in the abatement of the fresh water in all its usual currents and reservoirs, which are the best measure of the quantity of moisture falling from the clouds. What is most generally taken notice of in the accounts I have seen from Germany, France, and some other places, was, that the air in the beginning of winter, especially in November, was more than usually filled with thick and frequent fogs, the matter of which was not precipitated upon the earth in rain, snow, or any other fruits of the air. Fogs are so usual in this country in November, that there was nothing particular observed about them that I know. But there was hardly anything fell from the clouds during the month of November, except a very small quantity of snow, attended by a frost of no long duration; and this was all the winter we had. In the northern parts of France, there was a very small quantity of snow, which lasted from their 15th and our 4th of November till after Christmas. This was succeeded by southerly winds and stinking fogs, during which there was observed by some chirurgeons a great disposition in wounds to mortify\*. Both before and during the continuance of the disease in England, the air was warm, beyond the usual temper of the season, with great quantity of sulphureous vapours, producing great storms of wind from the south-west, and sometimes lightning without thunder.

XIII. "As to the times of the invasion of the disease, they were different in different countries. It invaded Saxony and the neighbouring countries in Germany, about the 15th of November, and lasted in its vigour till the 29th of the same month. It was earlier in Holland than in England; earlier in Edinburgh than in London. It was in New England before it attacked Britain; in London before it reached some other places westward, as Oxford, Bath, &c., and as far as I can collect from accounts, it invaded the northerly parts of Europe before the southerly; it lasted in its vigour in London, from about the middle of January, 1733, for about three weeks†; the bill of mortality from Tuesday the 23rd to Tuesday the 30th of January, contained in all 1,588, being higher than at any time since the plague. It began in Paris about the beginning of their February, or the 21st of our January, and lasted till the beginning of their April, or the 21st of our March, and I think its duration was longest in the southerly countries. It raged in Naples and the southerly parts of Italy, in our March. The disease, in travelling from place to place, did not observe the direction, but often went contrary to the course of the winds.

XIV. "The uniformity of the symptoms of the disease in every place was most remarkable. A small rigor or chilliness, succeeded with a fever of a duration (in

\* The late King of Denmark, it is said, had phlebitis; is not there some liability to this disease during an influenza epidemic?

† All the dates are in old style: January 15, 1732, is, therefore, January 26th, 1733, new style, &c. The French adopted the Gregorian reform of the calendar in 1582.

such as recovered), seldom above three days. This fever was attended with headache, sometimes pains in the back, thirst in no great degree, a catarrh or thin defluxion, occasioning sneezing, a coryza, or running at the nose, a cough, with expectoration of a thin pituite at first, and afterwards of a viscous matter, in which if there was observed a clear oily matter, it proved generally the case to be mortal, for this clear matter was purulent. These were the most common symptoms. But a great many during that season were affected with a spitting of blood, pleurisies, and inflammation of the lungs, dangerous and often mortal—in some places, particularly in France, the fever, after six or seven days, ended in miliary eruptions; in Holland, often in imposthumations of the throat; in all the blood was sisy, and everywhere the disease was fatal to aged people. What was observable was, that the fever left a debility and dejection of appetite and spirits, much more than in proportion to its strength or duration, and the cough outlasted the fever in some more than six weeks or two months.

XV. “There was, during the whole season, a great run of hysterical, hypochondriacal, and nervous distempers; in short, all the symptoms of relaxation. These symptoms were so high in some as to produce a sort of fatuity or madness, in which, for some hours together, they would be seized with a wandering of their senses, mistaking their common affairs; at the same time they had not any great degree of fever to confine them to their beds; but in several who were thus affected, the urine was observed often to change from pale to turbid alternately, so that there was some fever, though I did not observe nor hear that the bark was effectual, but the saline febrifuge draughts had, generally, a most surprising good effect. Since this disease has been over, the air has continued to be particularly noxious in diseases which affect the lungs, and for that reason occasioning a great and unusual mortality of the measles, at the rate of forty in the week, from which one has reason to expect some specialities in the diseases of the succeeding season.

XVI. “The remedies commonly successful in this epidemical catarrhus fever, were bleeding, sweating, promoted by watery diaphoretics, blisters, and the common pectoral medicines; and what I observed before, febrifuge draughts of salt of wormwood, juice of lemon, &c. I have not particulars enough to enable me to enter into the etiology of this distemper.

XVII. “It was a matter of fact, that there was a previous ill constitution of the air noxious to animal bodies. In autumn, and long afterwards, a madness among dogs; the horses were seized with the catarrh before mankind; and a gentleman averred to me, that some birds, particularly sparrows, left the place where he was during the sickness.

XVIII. “The previous great drought, as has been observed before, must have been particularly hurtful to mankind: great droughts exert their effects after the surface of the earth is again opened by moisture; and the perspiration of the ground, which was long suppressed is suddenly restored. It is probable that the earth then emits several new effluvia hurtful to human bodies; that this appeared to be the case by the thick and stinking fogs which succeeded the rain that had fallen before.

XIX. “It is likewise evident that this effluvia were not of any particular or mineral nature, because they were of a substance that was common to every part of the surface of the earth; and therefore one may conclude that they were watery exhalations, or at least such mixed with other exhalable substances that are common to every spot of ground.

XX. “Lastly, it is agreeable to experience that watery effluvia are hurtful to the glands of the windpipe and the lungs, and productive of catarrhs.”—Arbuthnot upon the Air, and its effect upon the Human Body, 1733, chap. 7, page 193. Tonson, Strand.

*Comparative Annual rate of Mortality per cent., in the healthiest and unhealthiest districts of London, during the seven years, 1838—44, and the last six weeks of 1847.*

ANNUAL RATE OF MORTALITY IN THE LEAST UNHEALTHY DISTRICTS.				ANNUAL RATE OF MORTALITY IN THE UNHEALTHIEST DISTRICTS.			
Districts.	During the 7 years 1838-44	During the last 6 weeks of 1847.	Excess in the 6 weeks of 1847	Districts.	During the 7 years 1838-44.	During the last 6 weeks of 1847.	Excess in the 6 weeks of 1847.
Lewisham .....	1.726	2.504*	.778	Holborn .....	2.369	5.595	3.226
Hackney .....	1.969	3.523	1.554	Bermondsey .....	2.639	5.363	2.724
Wandsworth .....	1.975	2.948	.973	Rotherhithe .....	2.767	6.319	3.552
Islington .....	1.996	4.196	2.200	St. Giles .....	2.690	4.709	2.019
St. James, Westmr.	2.117	3.491	1.374	St. George Southwark	2.669	5.492	2.823
Newington, (Surrey)	2.320	4.848	2.528	St. George in the East	2.887	6.881†	3.994
Mean .....	2.017	3.585	1.568	Mean .....	2.670	5.727	3.057
Corrected for Deaths in Hospitals	2.017	3.803	1.786	Mean .....	2.670	6.075	3.405

\* Lewisham corrected for deaths in hospitals, 1.656; it is probable, however, that few persons belonging to Lewisham district died in the London hospitals.

† St. George in the East corrected for deaths in hospitals, 7.299.

*Deaths in London from all Causes (exclusive of Violent and Sudden Deaths), and from Influenza, in the 13 Weeks of the Summer Quarters 1845, 1846, and 14 weeks of 1847.*

Number of Weeks.....	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	Total.
Deaths from all causes exclusive of Violent and Sudden Deaths.	1845 801	759	750	763	905	917	918	883	938	928	947	918	887	..	11,314
	1846 858	872	798	862	938	912	889	837	918	1,020	1,111	1,214	1,214	..	12,543
	1847 999	985	933	943	925	1,034	1,059	1,060	1,641	2,419	2,367	1,862	1,178	1,486	18,891
Deaths from In- fluenza.....	1845 ..	..	..	1	1	3	1	3	2	3	2	3	1	..	20
	1846 1	..	1	..	1	6	4	5	9	8	11	9	11	..	66
	1847 2	1	..	..	1	2	4	4	36	198	347	270	142	127	1,161
Mean Temperature	1845 55.0	47.7	52.9	45.9	48.9	47.2	44.8	45.5	46.1	42.4	39.2	43.6	40.1	..	46.1
	1846 53.5	56.4	50.5	49.1	43.2	49.1	44.1	47.8	45.8	32.0	35.9	29.9	36.3	..	44.2
	1847 51.7	53.0	54.8	53.5	49.8	50.5	49.8	40.7	46.5	47.9	46.7	48.0	35.4	34.8	47.4

*Deaths Registered in each of the Four Quarters of the Nine Years 1839—1847, in 117 of the Districts of England and Wales.*

Quarters ending	1839	1840	1841	1842	1843	1844	1845	1846	1847
March .....	42,410	46,376	46,967	41,903	43,748	46,136	49,949	43,850	56,105
June .....	41,244	42,071	39,133	38,569	40,313	38,977	40,817	43,731	51,585
September ..	37,317	39,498	36,058	39,409	36,953	38,933	36,139	51,427	49,479
December ..	41,740	44,186	39,292	39,662	42,608	44,080	39,291	53,093	57,925
Total .....	162,741	172,134	161,450	162,543	163,652	168,126	166,226	192,104	215,094

## MORTALITY OF THE COUNTRY.

Quarterly Table of the Mortality in 117 of the Districts of England (including the Principal Towns), showing the Number of Deaths Registered in the Quarters ending December of the Four Years 1844-45-46-47.

Parts of Divisions and Districts.	Population 1841.	Deaths Registered in the Quarters ending Dec. 31st.			
		Years.			
		1844.	1845.	1846.	1847.
<i>Metropolis*.</i>					
West Districts...	301,326	1,987	1,694	1,826	2,735
North Districts...	376,396	2,405	1,961	2,413	3,623
Central Districts	374,759	2,491	2,260	2,390	3,585
East Districts...	393,247	2,999	2,638	2,901	4,423
South Districts...	502,483	3,937	3,283	3,691	5,239
Total †.....	1,948,211	13,819	11,838	13,221	19,605
<i>South Eastern Division.</i>					
Maidstone.....	32,310	204	175	262	205
Brighton.....	46,742	302	251	375	309
Isle of Wight ..	42,547	235	167	201	179
Portsea Island..	53,036	341	347	380	476
Winchester .....	23,044	152	96	163	124
Windsor.....	20,502	93	86	87	90
Total .....	218,181	1,327	1,122	1,468	1,374
<i>South Midland Division.</i>					
St. Albans .....	17,051	94	75	91	76
Wycombe .....	34,150	198	135	182	170
Oxford .....	19,701	103	90	189	96
Northampton ..	28,103	181	140	181	205
Bedford .....	31,767	203	131	327	245
Cambridge .....	24,453	143	112	151	140
Total .....	155,225	922	683	1,121	932
<i>Eastern Division.</i>					
Colchester .....	17,790	122	85	152	127
Ipswich .....	25,254	135	145	212	167
Norwich .....	61,846	466	304	361	319
Yarmouth .....	24,031	164	99	133	145
Total .....	128,921	887	633	858	758
<i>South Western Division.</i>					
Devizes .....	22,130	109	102	137	129
Dorchester .....	23,380	95	95	135	101
Exeter .....	31,333	194	204	267	175
St. Thomas .....	47,105	217	183	276	177
Plymouth .....	36,527	279	180	306	306
Redruth .....	48,062	311	184	265	197
Penzance .....	50,100	366	214	269	191
Bath .....	63,232	420	341	414	429
Total .....	327,869	1,991	1,503	2,069	1,705
<i>Western Division.</i>					
Bristol .....	64,298	523	363	471	481
Clifton .....	66,233	385	378	403	419
Stroud .....	38,920	193	171	227	174
Cheltenham .....	40,221	222	194	221	170
Hereford .....	34,427	187	164	199	136
Shrewsbury .....	21,529	166	99	151	158
Worcester .....	27,130	150	149	198	176
Kidderminster ..	29,408	189	158	145	150
Dudley .....	86,028	697	475	768	963
Walsall .....	34,274	179	225	300	308
Wolverhampton ..	80,722	489	463	630	815
Wolverstanon ..	32,669	209	171	327	268
Birmingham.....	128,187	964	777	1,341	1,795
Aston .....	50,928	325	230	446	520
Coventry.....	31,028	244	193	225	210
Total .....	776,002	5,122	4,210	6,052	6,743

Parts of Divisions and Districts.	Population 1841.	Deaths Registered in the Quarters ending Dec. 31st.			
		Years.			
		1844.	1845.	1846.	1847.
<i>North Midland Division.</i>					
Leicester .....	50,932	387	354	460	345
Lincoln .....	36,110	160	158	197	215
Nottingham.....	53,080	382	304	353	466
Basford .....	59,634	345	252	373	270
Derby .....	55,015	219	188	222	310
Total .....	234,771	1,484	1,256	1,695	1,606
<i>North Western Division.</i>					
Stockport .....	85,672	474	437	793	571
Macclesfield ..	56,018	344	293	425	443
Great Brough- } ton (including } Chester) .....	49,085	263	235	392	270
Liverpool .....	223,054	2,130	1,982	2,735	3,725
West Derby } (adjoining } Liverpool) ..	88,652	814	673	1,111	1,122
Blackburn .....	75,091	577	433	853	606
Preston .....	77,189	429	551	968	636
Rochdale .....	60,577	329	395	492	455
Bury .....	77,486	445	439	717	594
Bolton .....	97,519	621	821	990	844
Wigan .....	66,032	371	401	675	552
Prescott .....	43,739	237	289	510	365
Chorlton .....	93,736	710	692	985	944
Manchester.....	192,408	1,652	1,413	2,318	2,210
Salford .....	70,228	525	451	726	623
Ashton .....	173,964	1,129	1,018	1,485	1,521
Total .....	1,530,460	11,050	10,523	16,175	15,481
<i>York Division.</i>					
Sheffield .....	85,076	599	527	805	734
Huddersfield ..	107,140	537	574	960	708
Halifax .....	103,175	596	635	671	603
Bradford .....	132,164	833	1,039	1,809	895
Leeds & Hunslett	168,667	1,103	891	1,389	1,413
Hull .....	41,130	314	261	404	489
York .....	47,779	336	231	342	522
Total .....	691,131	4,318	4,218	5,660	5,364
<i>Northern Division</i>					
Sunderland ....	56,226	269	378	358	496
Gateshead ....	38,747	214	215	426	293
Tynemouth .....	55,625	267	325	498	326
Newcastle-on- } Tyne..... } Carlisle .....	71,850	374	434	888	904
Cockermouth ..	36,084	204	183	327	279
Kendal .....	35,676	164	173	262	259
Total .....	34,694	160	213	268	155
Total .....	328,902	1,921	1,921	3,027	2,712
<i>Welsh Division.</i>					
Abergavenny ..	50,834	264	235	332	311
Pontypool .....	25,037	124	168	149	153
Merthyr Tydvil	52,864	469	334	388	483
Newtown .....	25,958	97	123	146	114
Wrexham .....	39,542	181	177	348	217
Holywell .....	40,787	228	184	268	209
Anglesey .....	35,105	155	163	206	158
Total .....	273,127	1,384	1,384	1,837	1,645
Ditto, exclu- } sive of the } Metropolis ..	4,664,589	30,261	27,453	39,872	38,320
Grand Total ..	6,612,800	44,080	39,291	53,093	57,925

\* The mortality of the districts of Wandsworth and Lewisham, and sub-district of Hampstead, is included in the above table, in each of the four years, though the deaths in Wandsworth did not appear in the Weekly Metropolitan Returns till 1844; nor those of Lewisham and Hampstead till 1847.

† The last quarter in London ended January 1, 1848, and contained the deaths in 14 weeks: deducting one week (the 6th in the Quarter) for the sake of comparison with the corresponding Quarter of former Years, the number of deaths in the West, North, Central, East, and South Districts, will be, respectively, 2,584, 3,416, 3,396, 4,202, 4,955. All London, 18,553.

‡ The former District of Leeds is now divided into the districts of *Leeds* and *Hunslet*, both included in the present return.

## MORTALITY OF THE METROPOLIS.

*A Table of the Mortality in the Metropolis, showing the Number of Deaths from all Causes, in the Quarters ending December of the Four Years, 1844-45-46-47.*

CAUSES OF DEATH.	Quarters ending December*.				CAUSES OF DEATH.	Quarters ending December*.			
	1844.	1845.	1846.	1847.		1844.	1845.	1846.	1847.
ALL CAUSES.....	13,819	11,838	13,221	19,605	III. Cephalitis.....	160	142	148	154
SPECIFIED CAUSES.....	13,619	11,631	12,986	19,571	Hydrocephalus.....	372	386	342	408
I. Zymotic (or Epidemic, Endemic, and Contagious) Diseases.....	2,991	2,724	2,198	5,788	Apoplexy.....	311	272	347	349
SPORADIC DISEASES.					Paralysis.....	235	213	267	307
II. Dropsy, Cancer, and other Diseases of uncertain or variable Seat.....	1,338	1,069	1,272	1,640	Convulsions.....	699	450	548	522
III. Diseases of the Brain, Spinal Marrow, Nerves, and Senses.....	2,001	1,727	1,959	2,150	Tetanus.....	4	6	5	5
IV. Diseases of the Lungs and of the other Organs of Respiration.....	4,265	3,567	4,313	6,101	Chorea.....	6	..	1	1
V. Diseases of the Heart and Blood Vessels.....	474	417	572	573	Epilepsy.....	54	68	77	90
VI. Diseases of the Stomach, Liver, and other Organs of Digestion.....	854	875	1,042	1,235	Insanity.....	14	30	18	26
VII. Diseases of the Kidneys, &c.....	101	140	141	190	Delirium Tremens.....	25	33	42	45
VIII. Childbirth, Diseases of the Uterus, &c.....	173	141	227	222	Disease of Brain, &c.....	121	127	164	173
IX. Rheumatism, Diseases of the Bones, Joints, &c.....	94	89	125	139	IV. Laryngitis.....	17	27	33	71
X. Diseases of the Skin, Cellular Tissue, &c.....	16	35	50	47	Quincy.....	35	10	14	34
XI. Old Age.....	898	519	651	957	Bronchitis.....	394	591	892	1,642
XII. Violence, Privation, and Intemperance.....	414	328	436	529	Pleurisy.....	30	43	43	76
I. Small Pox.....	571	106	42	372	Pneumonia.....	1,405	1,131	1,101	1,743
Measles.....	385	927	105	881	Hydrothorax.....	86	48	46	50
Scarlatina.....	872	269	322	747	Asthma.....	366	190	313	428
Whooping Cough.....	277	557	268	426	Phthisis or Consumption.....	1,676	1,382	1,985	1,873
Croup.....	102	82	65	116	Disease of Lungs, &c.....	256	145	186	184
Thrush.....	52	46	61	52	Pericarditis.....	35	22	26	27
Diarrhoea.....	129	199	331	400	Aneurism.....	10	19	16	24
Dysentery.....	34	25	43	91	Disease of Heart, &c.....	429	376	530	522
Cholera.....	5	11	15	12	Tetth.....	171	113	103	141
Influenza.....	32	20	66	1,161	Gastritis.....	15	10	28	23
Ague.....	14	3	6	12	Enteritis.....	184	114	112	135
Remittent Fever.....	10	12	17	31	Peritonitis.....	29	45	55	86
Typhus.....	385	358	619	1,279	Tabes Mesenterica.....	101	162	177	265
Erysipelas.....	106	77	106	176	Worms.....	11	10	5	9
Syphilis.....	17	31	32	32	Aseities.....	24	29	26	36
Hydrophobia.....	..	1	..	..	Ulceration (of Intestines, &c.).....	20	35	36	31
II. Inflammation.....	8	..	..	..	Hæmia.....	27	22	47	48
Hamorrhage.....	46	20	30	31	Colic or Ileus.....	29	16	34	44
Dropsy.....	337	134	170	198	Intussusception.....	8	6	9	10
Abscess.....	30	20	18	22	Stricture.....	6	12	8	11
Coma.....	..	2	3	11	Hæmatemesis.....	9	15	13	31
Mortification.....	61	27	47	43	Disease of Stomach, &c.....	52	71	101	98
Purpura.....	6	8	5	17	Disease of Pancreas.....	1	1	3	1
Scrofula.....	37	65	71	84	Hepatitis.....	23	54	50	58
Cancer.....	157	206	217	209	Jaundice.....	34	29	37	30
Tumour.....	4	1	2	5	Disease of Liver, &c.....	108	127	194	177
Gout.....	10	18	14	17	Disease of Spleen.....	2	4	4	1
Atrophy.....	164	186	255	380	VII. Nephritis.....	5	11	1	7
Debility.....	281	246	301	336	Ischuria.....	1	..	1	6
Malignations.....	17	54	46	52	Diabetes.....	19	12	3	8
Sudden Deaths.....	186	82	92	225	Cystitis.....	4	6	3	9
					Stone.....	9	11	8	10
					Stricture.....	12	20	18	15
					Disease of Kidneys, &c.....	60	80	107	135
					VIII. Childbirth.....	121	95	163	170
					Pæramenia.....	..	7	6	5
					Ovarian Dropsy.....	9	8	7	9
					Disease of Uterus, &c.....	43	31	51	38
					IX. Arthritis.....	..	3	3	5
					Rheumatism.....	43	46	67	65
					Disease of Joints, &c.....	51	40	55	69
					X. Carbuncle.....	1	3	1	5
					Phlegmon.....	2	1	9	8
					Ulcer.....	8	15	15	18
					Fistula.....	1	3	8	5
					Disease of Skin, &c.....	4	13	17	11
					XI. Old Age.....	898	519	651	957
					XII. Intemperance.....	10	23	24	28
					Privation.....	10	6	15	12
					Violent Deaths.....	394	299	397	489
					Causes not specified.....	200	207	235	34

\* The mortality of the district of Lewisham, and sub-district of Hampstead, was included in the Metropolitan returns at the commencement of 1847, for the first time. In this table the deaths in Lewisham and Hampstead for the December quarter in the previous years (1840-6), are included under the head of causes not specified.

† Under the head of "sudden deaths" are classed not only deaths described as sudden, of which the cause has not been ascertained or stated; but also all deaths returned by the Coroner in vague terms, such as "found dead," "natural causes," &c., &c.

QUARTERLY METEOROLOGICAL TABLE  
Compiled from the Weekly Tables furnished to the Registrar-General by the Astronomer Royal.

1847 Weeks ending	Phases of the Moon.	THERMOMETERS.										In the Water of the Thames at Greenwich by the Self-Regis- tering Thermo- meter read at 9 o'clock.		Difference between the dew point temperature and air tem- perature.		Difference between the mean temperature of the week and the mean temperature of the same week on an average of 25 years.	General Direction.	WIND.		The amount of Horizontal movement of the air in each week.	Mean amount of Cloud, 0-10.	Rain in inches [7 days.]	Deaths at The Asylums exclusive of violent and sudden Deaths							
		Self-Registering.			Dew Point.	Mean.			Mean of 72 observations weekly.	Highest in the Sun.	Lowest on the Grass.	Mean of 7 observations.	During the week.	Of the lowest on each day from 7 observations.	Of the highest on each day from 7 observations.			Mean of the least on each day, 6 observations.	Mean of the greatest on each day, 6 observations.				Mean of 72 differences.	Pressure in lbs. on the square foot.	Greatest pressure in the week.	Mean for the week.	0 to 15.	15 to 60.	60 and upwards.	
		Highest during the week.	Mean of 7 observations.	Lowest during the week.		Of the lowest on each day from 7 observations.	Of the highest on each day from 7 observations.	Mean of 7 observations.																						During the week.
Oct.	2 Last qr., Oct. 1st	30.085	62.8	33.3	50.3	44.2	16.1	51.7	45.0	32.8	77.4	24.0	35.5	55.0	54.8	6.7	12.9	2.1	—	2.5	E.	2.3	0.0	540	6.8	0.00	467	357	175	992
"	9 New, 9th	29.644	62.0	33.6	61.0	45.7	15.3	53.0	49.1	79.3	72.7	32.0	40.9	51.1	54.0	3.9	10.8	0.5	+ 3.3	Variable	1.0	0.0	735	7.8	0.72	483	313	189	985	
"	16 "	29.749	73.0	45.5	62.2	49.5	12.7	54.8	51.6	91.2	72.7	35.5	43.7	54.5	54.3	3.2	8.7	0.5	+ 3.3	Variable	2.5	0.0	515	8.5	0.05	415	316	201	933	
"	23 1st quarter, 17th	29.627	65.0	42.5	59.5	46.9	12.6	53.5	49.5	75.9	70.4	31.0	33.3	53.8	53.7	4.0	9.1	0.7	+ 3.3	S.S.W.	9.0	0.4	1245	6.0	1.04	461	312	166	913	
"	30 Last qr., 30th	30.145	69.6	35.2	55.1	44.2	10.9	49.8	45.9	75.8	62.3	26.5	37.8	51.3	50.0	3.9	8.5	1.0	+ 2.5	S.S.W.	3.5	0.1	760	7.8	0.28	462	299	164	925	
Nov.	6 "	30.077	62.0	43.8	55.0	46.6	8.4	50.5	49.2	..	..	27.0	36.2	50.6	50.4	3.2	7.0	1.0	+ 1.8	S.S.W.	5.5	0.3	1025	6.7	0.63	531	319	209	1059	
"	13 New, Nov. 8th	29.941	62.5	37.5	55.8	43.1	12.7	49.8	46.7	..	..	27.0	36.2	50.6	50.4	3.2	7.0	1.0	+ 1.8	S.W.	8.0	0.3	869	6.4	0.14	560	320	179	1060	
"	20 1st quarter, 15th	30.119	57.8	36.7	45.8	35.9	9.9	40.7	37.1	..	..	18.0	31.3	47.8	46.9	3.6	6.8	1.3	+ 5.0	S.S.W.	8.5	0.4	1135	8.5	0.85	738	301	382	1641	
"	27 Full, 22nd	29.618	56.5	39.0	51.6	41.8	9.8	46.5	43.8	..	..	29.0	36.2	44.4	42.9	2.7	5.4	0.8	+ 4.7	S.W.	8.0	0.5	1580	7.4	0.71	1001	702	716	2419	
Dec.	4 Last qr., 29th	29.820	57.2	37.5	52.7	41.1	11.6	47.9	45.1	..	..	28.5	33.2	44.5	44.3	2.8	5.3	0.2	+ 4.7	S.W.	12.5	1.9	1840	7.1	0.58	1000	675	692	2397	
"	11 New, Dec. 7th	30.304	56.1	34.5	56.2	41.5	8.7	46.7	42.6	..	..	25.0	34.2	43.9	42.9	4.1	6.7	1.7	+ 6.4	S.S.W.	5.0	0.7	1265	7.0	0.09	797	524	590	1862	
"	18 1st quarter, 15th	29.732	54.5	40.1	52.6	43.9	8.7	48.0	45.2	..	..	27.0	37.1	44.9	44.5	2.7	5.4	1.1	+ 7.9	S.	5.0	0.7	1265	7.0	0.09	797	524	590	1862	
"	25 Full, 21st	29.651	41.5	31.8	47.7	33.4	4.3	35.4	32.0	..	..	22.0	29.5	42.4	40.0	3.4	5.4	1.9	+ 4.2	Calm	1.5	0.0	295	9.6	0.63	558	355	264	1179	
Jan. 1, (1848).	Last qr., 29th	29.872	40.4	26.5	47.8	32.1	5.7	34.8	33.2	..	..	19.3	27.0	36.9	36.1	1.5	3.5	0.2	+ 2.1	Very Var	1.5	0.0	..	9.7	0.26	719	483	264	1486	
Mean, Highest, or Lowest of the 13 weeks.		29.815	73.0	36.5	52.7	42.1	10.6	17.4	44.0	..	..	18.0	36.1	48.2	47.6	3.4	7.1	1.0	+ 2.3	..	12.5	0.3	950	7.6	5.19	8740	5786	4360	18891	

\* The ages of 5 were not specified in the Returns.

+ Deaths enumerated under the heads "violent" and "sudden," chiefly consist of cases returned by the Coroner, many of which are registered, not when they occur, but at uncertain periods; and they are, therefore, excluded from this comparison of weeks.

## REMARKS ON THE WEATHER DURING THE QUARTER ENDING DECEMBER 31st, 1847.

By JAMES GLAISHER, Esq., *of the Royal Observatory, Greenwich.*

THE weather during the past quarter has been very remarkable in many respects. The daily temperature of the air, evaporation, and dew point, during the whole quarter, with the exceptions of the period between November 17 and November 21, and between December 20 and December 31, have been above the average for the season, and at times the departure has been very great.

It may perhaps tend to clearness if I speak of each subject of investigation separately.

The mean temperature of the air at Greenwich for the month of October was  $52^{\circ}9$ , which is  $4^{\circ}1$ ,  $7^{\circ}5$ ,  $4^{\circ}9$ ,  $3^{\circ}4$ ,  $2^{\circ}7$ , and  $2^{\circ}4$  above those in the years 1841 to 1846 respectively. The high temperature in this month is very remarkable; for the month of November was  $46^{\circ}9$ , which is  $4^{\circ}2$ ,  $4^{\circ}1$ ,  $3^{\circ}1$ ,  $2^{\circ}9$ ,  $1^{\circ}1$ , and  $0^{\circ}9$  above those of the years 1841 to 1846 respectively; for the month of December was  $42^{\circ}8$ , which is  $2^{\circ}3$  above that of 1841,  $2^{\circ}2$  below that of 1842,  $1^{\circ}1$  below that of 1843,  $9^{\circ}8$  above that of 1844,  $1^{\circ}1$  above that of 1845, and  $9^{\circ}9$  above that of 1846, or it is  $3^{\circ}3$  above the average for these six years.

The mean value for the quarter was  $47^{\circ}5$ ; that for 1841 was  $44^{\circ}0$ ; for 1842 was  $44^{\circ}4$ ; for 1843 was  $45^{\circ}2$ ; for 1844 was  $42^{\circ}2$ ; for 1845 was  $45^{\circ}9$ ; and for 1846 was  $43^{\circ}1$ ; so that the excess for this quarter above the corresponding quarter in the six preceding years is  $3^{\circ}5$ ,  $3^{\circ}1$ ,  $2^{\circ}3$ ,  $5^{\circ}3$ ,  $1^{\circ}6$ , and  $4^{\circ}4$  respectively, or it is  $3^{\circ}4$  above the average for these six years. This excess is very large indeed, considering that it extends over so long a period of time as one-fourth part of a year.

The mean temperature of evaporation at Greenwich for the month of October was  $50^{\circ}9$ , which is  $3^{\circ}6$  above that for the preceding six years; for the month of November was  $45^{\circ}6$ , which is  $2^{\circ}6$  above that for the preceding six years; for the month of December was  $41^{\circ}6$ , which is  $3^{\circ}3$  above that for the preceding six years.

The mean value for the quarter was  $46^{\circ}0$ , which is  $3^{\circ}2$  above that for the six preceding years.

The mean temperature of the dew-point at Greenwich for the month of October was  $49^{\circ}1$ , which is  $4^{\circ}0$ ,  $6^{\circ}7$ ,  $4^{\circ}4$ ,  $3^{\circ}1$ ,  $2^{\circ}6$ , and  $1^{\circ}2$  above that for the years 1841 to 1846 respectively, or it is  $3^{\circ}7$  above the average for these years; for the month of November was  $44^{\circ}1$ , which is  $4^{\circ}3$ ,  $3^{\circ}7$ ,  $3^{\circ}2$ ,  $2^{\circ}2$ ,  $1^{\circ}3$ , and  $1^{\circ}0$  above that for the years 1841 to 1846 respectively, or it is  $2^{\circ}6$  above the average for these years; for the month of December was  $39^{\circ}8$ , which is  $4^{\circ}6$  above that for 1841,  $3^{\circ}4$  below that for 1842,  $2^{\circ}2$  below that for 1843,  $9^{\circ}8$  above that for 1844,  $2^{\circ}2$  above that for 1845, and  $10^{\circ}4$  above that for 1846, or it is  $3^{\circ}6$  above the average for these years.

The mean value for the quarter was  $44^{\circ}3$ , which is  $3^{\circ}3$  above that for the six preceding years.

The mean weight of water in a cubic foot of air for the quarter was 3.2 grains, which is 0.4 grain above that for the preceding six years.

The additional weight of water required to saturate a cubic foot of air was 0.4 grain; the average for the preceding six years was 0.3 grain.

The mean degree of humidity of the atmosphere for the quarter was 0.900, which is the same as that for the six preceding years.

The mean elastic force of vapour for the quarter was 0.310 inch, which is 0.30 inch above the average for the six preceding years.

The mean reading of the barometer at Greenwich for the quarter was 29·829 inches, which is 0·111 inch above the average of the six preceding years.

The average weight of a cubic foot of air under the average temperature, humidity, and pressure, was 540 grains; the average for the six preceding years was 543 grains.

The rain fallen at Greenwich within the quarter was six inches in depth; this quantity is two inches less than the average for the six preceding years. The total amount of rain fallen in the year 1847 was 17·6 inches, which is nearly eight inches less than the average amount for the six preceding years.

The temperature of the Thames water was 48°2 by day, and 47°6 by night. The water, on an average, was nearly of the same temperature as the air.

The horizontal movement of the air was about 950 miles weekly, being somewhat less than the average amount.

The highest and lowest readings of the thermometer in air at the height of four feet above the ground, and protected as much as possible from the effects of radiation and rain, were 73°2 and 24°5.

The average daily range of the readings of thermometers in air at the height of four feet, was 11°7, which is 3°8 greater than the average range for the six preceding years.

In October the readings of the thermometer on grass were at or below 32° on five nights, and the lowest reading was 26°5. In November it was below 32° on thirteen nights, and the lowest reading was 18°. In December it was below 32° on sixteen nights, and the lowest reading was 19°3. The periods of time, however, during which these readings have continued were very short, owing to the very cloudy state of the sky during the nights. The amount of heat radiated from the earth at night during the past quarter was very small indeed.

The mean amount of cloud during the quarter was such as to cover, upon the average, a little more than three-fourths of the whole sky. The month of December was more clouded than any month since January, 1845.

It is a fact well worthy of notice, that from the beginning of this quarter till the 20th of December, the electricity of the atmosphere was almost always in a neutral state, so that no signs of electricity whatever were shown for several days together by any of the electrical instruments. During this period I several times minutely examined the whole of the electrical apparatus, and always found it in a satisfactory state. On the above day, and on every day afterwards till the end of the quarter, active electricity was shown.

The approximate mean monthly temperature for other places besides Greenwich are shown in the subjoined tables, and they differ but little in each month from those of Greenwich. In the comparison between places situated at different elevations, there is one leading difference in respect to temperature which we must expect to find, viz., that at the places of a higher level, a lower mean temperature, and a greater range of temperature take place, than at places situated at a lower level. These conditions are very clearly shown in the subjoined tables.

The monthly mean temperatures of the places in Cornwall and Devonshire, in each of these three months, were somewhat above those at other places. At Exeter, however, the difference in this respect from those in other counties is small; in fact, the weather at this place during the past quarter, has more nearly resembled that of places out of these counties than that of places situated within them.

The remarkably cold period referred to above, which happened between November 17 and November 21, periods of so different temperature, deserves particular notice. As far as I can infer from the Meteorological returns from the country,

it seems to have been general. Snow, to a considerable depth, fell within this period in Suffolk; but it is not noticed as having fallen elsewhere. The particulars of the changes of temperature in the months of November and December I have detailed in the Weekly Reports for December. I may here remark, however, that during these two months the usual diurnal rise and fall of the temperatures of the air and of the dew-point very frequently did not take place, and they were often reversed, a nocturnal rising temperature, and a daily falling temperature, being of frequent occurrence.

As might be expected from these anomalous changes of temperature, the usual diurnal difference in the readings of the barometer did not take place. The readings of the barometer did not take place. The readings, at times, constantly increased for several days together, and then decreased for several days together. In December, on the 7th day, at 3<sup>h</sup> A.M., the remarkably low reading of 28·383 inches took place at Greenwich; and this low reading was general over the country, but it first took place at northern places, and then at southern; thus the minimum occurred at Durham on December 6, at 6 P.M., and it was 27·89 inches; at Stonyhurst, during the evening, and it was 27·841 inches; at Liverpool, at 10<sup>h</sup> P.M., and it was 28·184 inches; at Cambridge, on December 7th, at 1<sup>h</sup> 30<sup>m</sup> A.M., and it was 28·382 inches; and at Greenwich, on December 7, at 3<sup>h</sup> A.M., and it was, as stated above, 28·383 inches. A reading so low as this is of rare occurrence. The previous instances at Greenwich are as follows:—In 1783, on March 6, the reading was 28·12 inches; in 1809, on December 17, the reading was 28·20 inches; in 1821, on December 25, the reading was 27·89 inches; in 1824, on November 23, the reading was 28·37 inches; and in 1843, on January 13, the reading was 28·10 inches.

During the quarter there were eight exhibitions of *Aurora Borealis*, which occurred on the following days:—October 15, 23, and 24; November 1, 2, and 19; December 2, and 19. That on October 24 was one of the finest I have seen (see the “*Philosophical Magazine*” for November, and the “*Athenæum*” for November). At every one of these times the magnets were much disturbed. The magnetic disturbance connected with the *Aurora* of October 24, exhibited a greater amount of consecutive disturbance than had been before experienced at Greenwich, since the establishment of the Magnetic Observatory in 1840. (See the “*Philosophical Magazine*” for January, 1848, and a forthcoming account of the *Aurora* seen in Cambridge, by Mr. Morgan, of the Cambridge Observatory.)

From the preceding remarks it will be seen, that the weather during the past quarter has been very unusual indeed. I have searched all meteorological records at my command, which have been made in the previous fifty years, and I have failed to find any season of similar character. In the year 1806 the average temperature for the last quarter of the year was 50°1, (see “*Philosophical Transactions*” for that year.) and this result nearly agrees with that found by Luke Howard, Esq., (see his *Climate of London*.) which was 50°3; but although this value is greater than that of the past three months, yet I am inclined to think that the temperature of that period in 1806 did not really exceed that of 1847, as at that time all mean temperatures depended solely on uncomparated self-registering thermometers, and it is found that even with good self-registering thermometers a subtractive correction is always required to deduce from them the true mean for the month. The only October in this century whose temperature seems really to have exceeded that of the past October is that of 1811. So that whether we compare the weather of the past quarter by longer or shorter periods with weather of similar kind in past years, the character which it exhibits is rare and remarkable.



From the numbers in the first column it appears that the volume of dry air was very nearly the same at all parts of the country. The mean of all the results in the first column is 29·640 inches, and this may be considered as the pressure of dry air for England during the quarter ending December 31, 1847.

From the numbers in the second column, we find for the quarter ending December 31, 1847, that the mean temperature of the air for the counties of Cornwall and Devonshire was 48°·9, and for the remaining counties, excepting those N. of latitude 54°, was 45°·7, and that the mean temperature of Durham and Newcastle was 44°·8.

The average daily range of the temperature of the air in Cornwall and Devonshire was 8°·6; at Brighton and Liverpool was 6°·4; and the mean value for all other places was 10°·5. The greatest mean daily ranges took place at Hartwell, Cambridge, Latimer Rectory, Uckfield, &c., and the least occurred at Brighton, Liverpool, Torquay, Truro, Norwich, &c.

The highest reading during the quarter was at Greenwich, which was 73°·2, and the lowest was at Beckington, which was 14°. The extreme range of temperature in England, during the quarter, was therefore 59°·2.

The average quarterly range of the thermometer readings in Cornwall and Devonshire was 35°·7; at Brighton and Liverpool was 33°·6; at those places situated between the latitudes of 51° and 52¼° was 44°·7; and between the latitudes of 52¼° and 55° was 36°. The ranges at those places situated at a high elevation, in all cases, are much greater than at those places situated in the same parallel of latitude, but at a lower elevation.

The mean direction of the wind for all places was S.W., except at Brighton, where it was N.E.

From the numbers in the ninth column it appears that the distribution of cloud has been nearly the same at all parts of the country, and such as to cover three-fourths of the whole sky.

The fall of rain has been the largest in Cornwall and Devonshire, the average amount for the quarter was 16 inches, and it has fallen on a greater number of days in those counties than in any others, the average number is 54, but this number was exceeded by 7 at Truro. At Torquay the number was 43 only. At Walworth the fall seems to have been the least in amount, but this value is not confirmed by those at neighbouring places. The next in order is Cambridge, Lewisham, Saffron Waldon, Greenwich, Uckfield, Cardington, and Norwich. (The construction of the several gauges are different, and many of them have not been tested either by weighing the collected water, or by accurately measuring the vessels in which it is received. At Walworth, Crosley's self-registering gauge is used, which construction of gauge, after being in use a short time, does not truly register the fall, and should not be depended upon solely in any case.)

Columns 12 to 16 contain the mean hygrometrical results, and they are nearly identical at most places. At Beckington, however, the air seems to have been nearly in a state of saturation during these three months, if the instruments be good by which the observations were made, they have not, however, been compared with standards. The degree of humidity in the Vale of Aylesbury is greater than that due to its latitude, and this seems to be decided, as the results at three different stations agree very well together.

The mean weight of vapour in a cubic foot of air for England (excepting Cornwall and Devonshire) in the quarter ending December 31, 1847, was 3·4 grains.

The mean additional weight required to saturate a cubic foot of air in the quarter ending December 31, 1847, was 0·4 grains.

The mean degree of humidity in the quarter ending December 31, 1847, was 0·903.

The mean amount of vapour mixed with the air would have produced water, if all had been precipitated at one time on the surface of the earth, to the depth of 4·2 inches in the quarter ending December 31, 1847.

The mean weight of air under its average heat, humidity, and pressure, in the quarter ending December 31, 1847, was 538 grains.

And those values for Cornwall and Devonshire were 3·8 grains; 0·3 grain; 0·914; 4·8 inches and 537 grains.

The results from the station in Ireland, depending on the temperature of the air, the direction and strength of the wind, and the amount of clouds, agree with those in England at the same latitude; but the results which depend on humidity of the air, and on the amount of rain, exhibit an excess over those in England.

N.B.—Skeleton Forms, drawn up by Mr. Glaisher, for the registration of Meteorological Observations twice a day, are on sale at Mr. J. Clark's, Stationer, 13, Moor-gate-street, near the Bank, London.

## REVENUE.

*Abstract of the Net Produce of the Revenue of Great Britain in the Years and Quarters ending 5th April, 1847 and 1848; showing the Increase or Decrease thereof.—(Continued from page 93.)*

Sources of Revenue.	Years ending 5th April.			
	1847.	1848.	Increase.	Decrease.
	£	£	£	£
Customs.....	18,796,620	17,960,275	....	836,345
Excise .....	12,547,657	12,080,482	....	467,175
Stamps .....	7,062,828	6,760,932	....	301,896
Taxes.....	4,237,158	4,347,571	90,413	....
Property Tax .....	5,464,581	5,459,369	....	5,212
Post Office.....	820,000	866,000	46,000	....
Crown Lands.....	112,000	61,000	....	51,000
Miscellaneous .....	318,161	148,640	....	169,521
Total Ordinary Revenue ....	49,379,005	47,684,269	136,413	1,831,149
China Money .....	667,644	455,021	....	212,623
Imprest and other Moneys .	193,497	187,235	....	6,262
Repayments of Advances....	778,506	473,616	....	304,890
Total Income.....	51,018,652	48,800,141	136,413	2,354,924
	Deduct Increase .....			136,413
	Decrease on the Year .....			2,218,511

Sources of Revenue.	Quarters ending 5th April.			
	1847.	1848.	Increase.	Decrease.
	£	£	£	£
Customs .....	4,447,673	4,392,650	....	55,023
Excise .....	1,652,865	2,002,601	349,736	....
Stamps .....	1,817,282	1,618,668	....	198,614
Taxes.....	130,892	143,902	13,010	....
Property Tax.....	2,033,072	2,041,640	8,568	....
Post Office.....	219,000	221,000	2,000	....
Crown Lands.....	37,000	21,000	....	16,000
Miscellaneous .....	92,593	56,307	....	36,286
Total Ordinary Revenue ....	10,430,377	10,497,768	373,314	305,923
China Money .....	....	455,021	455,021	....
Imprest and other Moneys	53,859	24,452	....	29,407
Repayments of Advances ....	164,568	74,138	....	90,430
Total Income.....	10,648,804	11,051,379	828,335	425,760
	Deduct Decrease .....		425,760	
	Decrease on the Quarter....			£402,575

*Consolidated Fund Operations.*—The total income brought to this account in the quarter ending 5th April, 1848, was 11,065,324*l.* The total charge upon it was 7,427,038*l.*, leaving a surplus of 3,638,286*l.*

The probable amount of Exchequer Bills required to meet the charge on the Consolidated Fund in the quarter ending 5th April, 1848, is stated at 1,435,398*l.*

## CORN.

*Average Prices of Corn per Imperial Quarter in England and Wales, during each Week of the First Quarter of 1848; together with the Average Prices for the whole Quarter.—(Continued from p. 94.)*

Returns received at the Corn Office, 1848.		Wheat.		Barley.	Oats.	Rye.	Beans.	Peas.
		Weekly Average	Aggregate Average of Six Weeks regulating Duty.	Weekly Average	Weekly Average	Weekly Average	Weekly Average	Weekly Average
Weeks ending 1848.		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
January	1 .....	53 11	52 8	31 8	20 7	29 11	39 10	44 10
	8 .....	53 10	52 10	31 7	20 11	31 4	40 8	46 0
	15 .....	53 5	53 1	30 6	21 0	29 2	39 1	46 4
	22 .....	53 1	53 3	30 4	21 1	30 8	38 8	45 2
February	29 .....	52 0	53 3	30 8	21 3	30 6	38 7	43 5
	5 .....	51 2	52 11	30 9	20 7	32 6	38 5	42 9
	12 .....	51 0	52 5	31 2	20 7	30 5	38 1	43 2
	19 .....	50 11	51 11	31 3	21 1	32 4	37 10	42 5
March	26 .....	50 2	51 5	30 9	20 8	30 3	38 0	41 7
	4 .....	49 11	50 10	30 8	20 5	30 5	36 9	41 8
	11 .....	50 2	50 7	30 4	20 2	33 4	36 2	39 0
	18 .....	50 4	50 5	30 5	20 4	28 6	36 2	39 10
Average of the Quarter)	25 .....	51 4	50 6	30 11	20 4	30 4	35 5	38 2
	.....	51 7	52 0	30 10	20 8	30 9	37 11	42 8

*Foreign and Colonial Wheat and Flour imported in each of the Months ending 5th January, 5th February, and 5th March, 1848; the Quantities Entered for Home Consumption during the same Months; and the Quantities remaining in Warehouse at the close of them.—(Continued from p. 94.)*

## WHEAT.

Months ending.	Imported.			Entered for Home Consumption.			In Warehouse at the Month's end.		
	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.
1848	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.
5th Jan.	228,993	2,739	231,732	229,059	2,739	231,798	..	..	..
5th Feb.	82,153	86	82,239	82,153	86	82,239	..	..	..
5th Mar.	98,826	257	99,083	97,244	257	97,501	1,581	..	1,581

## WHEAT-FLOUR.

Months ending.	Imported.			Entered for Home Consumption.			In Warehouse at the Month's end.		
	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.
1848	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.
5th Jan.	18,813	12,689	31,502	20,094	12,863	32,957	1,376	..	1,376
5th Feb.	10,569	11,353	21,922	41,945	11,353	53,298	..	..	..
5th Mar.	115,108	2,111	117,219	115,108	2,111	117,219	50	..	50

## CURRENCY.

## BANK OF ENGLAND.

*An Account, pursuant to the Act of the 7th and 8th Victoria, c. 32, for the Weeks ending on Saturday, the 8th January, the 5th February, and the 4th March, 1848.—(Continued from p. 95.)*

## ISSUE DEPARTMENT.

	Weeks ending		
	8th Jan., 1848.	5th Feb., 1848.	4th March, 1848.
	£	£	£
Notes issued .....	25,876,770	27,210,880	28,205,830
Government Debt .....	11,015,100	11,015,100	11,015,100
Other Securities .....	2,984,900	2,984,900	2,984,900
Gold Coin and Bullion .....	10,476,623	11,767,865	12,762,502
Silver Bullion .....	1,400,147	1,443,015	1,443,328
Total .....	25,876,770	27,210,880	28,205,830

## BANKING DEPARTMENT.

Proprietors' Capital .....	14,553,000	14,553,000	14,553,000
Rest .....	3,684,629	3,803,998	3,980,840
Public Deposits .....	5,414,008	4,574,063	6,574,785
Other Deposits .....	10,858,286	10,299,027	9,249,804
Seven Day and other Bills ....	846,364	898,217	830,260
Total .....	35,356,287	34,128,305	35,188,689
Government Securities, including } Dead Weight Annuities .... }	10,993,353	11,553,914	11,574,921
Other Securities .....	16,345,958	13,888,592	13,115,456
Notes .....	7,315,385	8,074,925	9,830,215
Gold and Silver Coin .....	701,591	610,874	668,097
Total .....	35,356,287	34,128,305	35,188,689

## COUNTRY BANKS.

*Average Aggregate Amount of Promissory Notes of Country Banks, which have been in Circulation in the United Kingdom, distinguishing the several Banks, or Classes of Banks by which issued in each part of the Kingdom, during the weeks ending 4th December, 1847, January 1st, and January 29th, 1848.—(Continued from p. 95.)*

Banks.	4th Dec., 1847.	1st Jan., 1848.	29th Jan., 1848.
England—Private Banks .....	3,698,050	3,528,273	3,745,700
Joint Stock Banks .....	2,576,770	2,410,222	2,534,855
Scotland—Chartered, Private, and } Joint Stock Banks .....	3,732,485	3,341,317	3,161,022
Ireland—Bank of Ireland .....	3,175,400	3,088,700	3,098,425
Private and Joint Stock } Banks .....	2,147,341	2,107,416	2,135,491
Total .....	15,330,046	14,475,928	14,675,493

## BANKRUPTCY.

*An Analysis of the Bankruptcies in England and Wales, gazetted in each Month of the Quarter ending March 31, 1848; showing the Counties and Branches of Industry in which they have occurred.--(Continued from p. 96.)*

COUNTIES.	January.	February.	March.	TRADES.	January.	February.	March.
Metropolis.....	58	41	37	<i>Agriculture and connected Trades.</i>			
Bedford .....			2	Farmers .....	4	3	2
Berks .....	1		1	Agricultural Implement } .....	1	2	1
Bucks .....			1	Makers, &c. ....			
Cambridge .....		1	2	Corn Factors .....	3	2	2
Cheshire .....		2		Millers and Malsters .....	1	1	
Cornwall .....	1	1	2	Hop Merchants .....			6
Cumberland .....	3		1	Brewers .....	5	4	6
Derby .....	2		1	Horse and Cattle Dealers, and } .....	6	2	4
Devon .....	19	15	7	Woolstaplers .....			
Dorset .....	2	2	1	<i>Mining and connected Trades.</i>			
Durham .....	3		2	Mining Firms .....	3	3	5
Essex .....	6	2	3	Blasting Works .....	3	2	2
Gloucester .....	1		4	<i>Manufactures.</i>			
Hants .....	3	6	3	Woollen Manufacturers .....	4	2	7
Hereford .....		1	1	Cotton „ .....	2	1	4
Hertford .....			2	Linen „ .....	4	4	1
Huntingdon .....		1	1	Silk „ .....	2		1
Kent .....	6	4	1	Printers and Dyers .....	1	3	1
Lancashire.....	30	28	35	Lace Manufacturers .....			
Leicester .....	11			Hosiery „ .....	7	7	10
Lincoln .....	3	1		Hardware „ .....	4	1	6
Middlesex (exclusive } of the Metropolis) }	13	9	17	Earthenware „ .....		1	2
Monmouth .....		2	4	Glass „ .....		1	1
Norfolk .....	1	2	2	Paper „ .....	4	1	2
Northampton .....		1	2	Builders .....	10	8	15
Northumberland .....	1	7	7	Miscellaneous Manufacturers....	27	22	20
Nottingham .....	3	3	3	<i>Commerce.</i>			
Oxford .....		1	1	Bankers and Merchants .....	11	13	10
Rutland .....			1	Shipowners, Warehousemen, } .....			
Salop .....			1	Brokers, and Wholesale } .....	11	12	8
Somerset (including } Bristol) }	13	3	24	Dealers generally .....			
Stafford .....		3	2	<i>Retail and Handicraft Trades.</i>			
Suffolk .....	3		1	Bakers .....	5	2	3
Surrey (exclusive of } the Metropolis) }	5	2	1	Butchers .....	3	1	4
Sussex .....	2	2	2	Corn and Hay Dealers .....			3
Warwick .....	13	16	22	Innkeepers and Victuallers.....	20	12	25
Westmoreland .....				Wine and Spirit Merchants ....	9	2	5
Wilts .....	2	2	2	Dealers in Grocery, Drugs, } .....	26	25	13
Worcester .....			2	and Spices .....			
York (East Riding) ....	4	1		Makers of, and Dealers in, } .....	2	3	2
„ (North Riding) .....		1	2	Clothing .....			
„ West Riding ....	8	17	10	Makers of, and Dealers in, } .....	2	2	3
Wales .....	4	1	3	Furniture .....			
				Coach Builders .....	2	3	1
				Miscellaneous .....	39	33	41
Total .....	221	178	216	Total.....	221	178	216

# QUARTERLY JOURNAL

OF THE

## STATISTICAL SOCIETY OF LONDON.

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AUGUST, 1848.

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*Report to the Council of the Statistical Society of London from a Committee of its Fellows appointed to make an Investigation into the State of the Poorer Classes in St. George's in the East, with the sum of £25 given for this purpose by HENRY HALLAM, Esq., F.R.S., aided by a Donation of £10 from R. A. SLANEY, Esq., M.P., and further sums from the General Resources of the Society.*

[Read before the Statistical Society of London, 17th April and 15th May, 1848.]

ST. GEORGE'S in the East was selected for this inquiry as a district comprising a considerable population of the labouring classes, resembling in condition the people of many surrounding localities, and offering, in fact, an example of the *average condition* of the poorer classes of the metropolis.

The general mass of the labouring population in urban localities, where they are subject to influences over which they have but a partial control, being now avowedly an object of public policy as well as philanthropic solicitude, the Committee, with the advice of the gentleman whose liberality had given it being, determined to make a complete and detailed examination, and a careful analytical statement of the condition of such a body of the poorer labouring classes of the metropolis, as their means would permit them to embrace within the limits of their inquiry, rather than devote those means to exhibiting the condition of any one of those lowest sinks of barbarism and vice, which sanitary and other reports have recently placed with such painful truth before the public. Investigation must not stop until these are removed, for they are but the local accumulation of general evils, which can never be completely dissipated until great changes have been accomplished in the whole frame of society. But since their population is, to some extent, the drainage from the grades next above them, we should rather hope to find a cure by cutting off the supply of degradation than by attempting to reform and elevate it in the lowest depths to which it can sink.





TABLE I.—Names of Streets, Courts, and Places of St. Mary's District of St. George's in the East, condition as regards Lighting and Paving.

Names of Streets, Courts, and Places.	Height of Houses, Length and Width of Place.			Open or not at Each End.			Paving and Lighting.		
	Height of houses in stories.	Length of street in yards.	Width of street in feet.	Open at both ends.	Open at one end.	Various entrances.	Paved and lighted.	Paved but not lighted.	Neither paved nor lighted.
	Stories*.	Yards.	Feet.						
Upper Grove Street.....	2	600	24	1	..	..	Well	..	..
Batty's Garden.....	2	90	Av. 8	1	..	..	Partially	..	..
Henry Street.....	2	120	17	1	..	..	Well	..	..
Everard Street.....	2	130	18	1	..	..	Well	..	..
Rix Court.....	2	60	9	1	..	..	Partially	..	..
Rhan's Court.....	2	18	10	..	1	..	Well	..	..
Philip Street.....	2	100	11	1	..	..	Well	..	..
Splidts Terrace.....	2	130	Av. 15	1	..	..	Well	..	..
Ellen Street.....	2	220	16	1	..	..	Well	..	..
Ellen Place.....	2	40	12	..	..	Opening in centre	Well	..	..
Ellen Court.....	2	15	11	..	1		..	1	..
Blacksmith's Arms Place.....	2	50	12	..	..	..	Partially	..	..
Thomas Street.....	2	130	30	1	..	..	Well	..	..
Sarah Place.....	2	20	13	..	1	..	Well	..	..
Prince of Orange Court.....	2	32	9	1	..	..	Well	..	..
Globe Place.....	2	40	7	..	1	..	Well	..	..
Elizabeth Street.....	2	130	27	1	..	..	Partially	..	..
Seyern Street.....	2	96	27	1	..	..	Well	..	..
Mary Ann Street.....	2	100	27	1	..	..	Well	..	..
North Street.....	2, a few 3	300	30	1	..	..	Well	..	..
Blacksmith's Arms Court.....	2	40	9	..	..	..	Partially	..	..
Campbell's Place.....	2	44	Av. 12	..	1	..	Well	..	..
Frederick Street.....	2	120	16	1	..	..	Well	..	..
Charles Street.....	2	70	15	1	..	..	Well	..	..
Providence Street.....	2	118	21	1	..	..	Well	..	..
Church Lane.....	2 and 3	560	33	1	..	..	Well	..	..
Hampshire Court.....	2	30	12	1	..	..	Well	..	..
Queen's Court.....	2	20	12	..	1	..	Well	..	..
Batty's Place.....	2	16	11	..	1	..	..	1	..
Abel Buildings.....	2	18	11	..	1	..	..	1	..
Christian Street.....	2 and 3	550	33	1	..	..	Well	..	..
Lower King Street.....									
Matilda Place.....	2	16	8	..	1	..	Well	..	..
Matilda Street.....	2	32	12	1	..	..	Well	..	..
Batty's Street.....	2 and 3	150	27	1	..	..	Well	..	..
Gloucester Buildings.....	2	78	12	..	1	..	Well	..	..
Batty's Court.....	2	21	4	..	1	..	Partially	..	..
Grove Court.....	2	40	10	..	..	{ Narrow entrance in centre }	..	..	1
Lower Berner's Street.....	3	300	36	..	1				
Upper Berner's Street.....					..	Well	..	..	
Lloyd's Court.....	2	8	6	..	1	A narrow entrance	..	..	1
London Terrace.....	2	316	10½	1	..				
Patriot Street.....	2	55½	19½	1	..	..	Well	..	..
Langdale Street.....	2	81	24	1	..	..	Bad	..	..
Norman's Buildings.....	2	7	18	..	1	..	Badly	..	..
James Place.....	2	21	9	..	1	..	..	..	1
West Folly.....	2	4	3	..	..	..	..	..	1
Cross Street.....	2	34	21	1	..	..	Badly	..	..
Langdale Court.....	2	3	3	..	..	..	Badly	..	..
Marmaduke Place.....	2	32	12	..	1	..	Well	..	..
Marmaduke Street.....	2	Not	stated.	1	..	..	Well	..	..
St. George's Court.....	2	78	15	1	..	..	Well	..	..
Amber Court.....	2	11	4½	..	1	..	..	1	..
Wellington Buildings, (Saml. St.)	2	39	12	..	1	..	Well	..	..
Waterloo Place, (Samuel Street).	2	64	7½	..	1	..	Badly	..	..
Samuel Street.....	2	175	15	1	..	..	{ Paving bad; lighting good }	..	..
John Street.....	2 and 3	Not	stated.	1	..	..			
James Street.....	2	Not	stated.	..	..	..	Well	..	..
St. George's Terrace.....	2	170	4½	..	1	..	Well	..	..
Marman Street.....	2	112	27	..	..	..	Tolerably	..	..
Western Passage.....	2	12	6	1	..	..	Well	..	..
Marmaduke Court.....	2	50	6	..	..	Opening in centre	Well	..	..
Turner's Buildings, (Grove St.)	2	29	18	1	..		Well	..	..
Lower Grove Street.....	2	140	27	..	..	..	Well	..	..
Middle Grove Street.....	2	No data	filed	ac	count	given	of these streets	— See	Remarks
Upper Grove Street.....									
63 Streets, Courts, and Places..	..	6,085½	895½	32	20	4	{ Well ... 42 Partially or badly 12 }	4	4
Average.....	..	103	15	..	..	7	..	..	1

\* Reckoning the ground floor as one story.

† If there were good and clean surface drains the drainage was

North of Cable Street, with the Height of Buildings, Length and Width of Streets, &c., and their Cleansing, Drainage, and Supply of Water.

Cleansing.			Drainage†.			Water.	REMARKS.
Well cleaned.	Tolerably cleaned.	Badly cleaned.	Good drainage.	Tolerable drainage.	Bad drainage.	Plentiful supply three times a week.	
1	..	..	1	..	..	1	<i>Batty's Garden.</i> —At one end only open by an arch 3 ft. 10 in. wide and 9 ft. high. Many of the houses in this street have no back premises, neither light nor ventilation from behind, and consequently are close, damp, and unhealthy. The street is angular, and at one corner of the narrow part is a dust-heap, on which is thrown night-soil and refuse of every description, which saturates and penetrates through the walls to the premises behind, creating a most disgusting nuisance to the tenants. This dust-heap is directly opposite the door of one of the houses. Some of the privies are entirely choked and cannot be used.
..	..	..	..	..	1	1	
..	1	..	1	..	..	1	
..	{ 1 except east end }	..	1	..	..	1	
1		..	1	..	..	1	
1		..	1	..	..	1	
1	..	..	1	..	..	1	
1	..	..	1	..	..	1	
1	..	..	1	..	..	1	
1	..	..	1	..	..	1	
1	..	..	1	..	..	1	
1	..	1	1	..	..	1	
1	..	..	1	..	..	1	
1	..	..	1	..	..	1	
1	..	1	1	..	..	1	
1	..	..	1	..	..	1	
1	..	..	1	..	..	1	
..	..	1	1	..	..	{ 1 pipe to supply water to all; say 10 houses.	
1	..	..	1	..	..	1	<i>Campbell's Place.</i> —These houses are very confined in the rear, having neither door nor window in the ground-floor.
1	..	..	1	..	..	1	
1	..	..	1	..	..	1	
1	..	..	1	..	..	1	
1	..	..	1	..	..	1	
1	..	..	1	..	..	1	
1	..	..	1	..	..	1	
1	..	..	1	..	..	1	
1	..	..	1	..	..	1	
1	..	..	1	..	..	1	
1	..	..	1	..	..	1	<i>Batty's Court.</i> —No light or air behind.
..	..	1	1	..	..	{ No water-butts, & only cock for all the houses.	
1	..	..	1	..	..	1	
..	..	..	1	..	..	1	<i>Patriot Street.</i> —Rooms small, 6 by 12. <i>Norman's Buildings.</i> —Inhabitants complain greatly of damp, also of rats and beetles. <i>Marmaduke Place.</i> —Good houses. <i>Marmaduke St.</i> —Houses generally in bad condition <i>St. George's Court.</i> —Houses generally dilapidated. Rooms 12 by 10. <i>Wellington Buildings.</i> —Houses have no back yards and are infested with beetles and bugs <i>Waterloo Place.</i> —No. 14 to 20 rebuilding.
..	1	..	..	1	..	1	
..	..	1	..	..	1	1	
..	..	1	..	..	1	1	
..	..	1	..	..	1	1	
..	..	1	..	..	1	1	
..	..	1	..	..	1	1	
1	..	1	..	1	..	1	
..	..	..	..	..	1	1	
..	..	..	..	..	1	1	
..	1	..	..	1	..	1	<i>St. George's Terrace.</i> —Houses in very bad repair. <i>Marmaduke Court.</i> —Inhabitants very poor. <i>Lower Grove Street.</i> —Chiefly respectable. <i>Middle Grove Street.</i> —Same length as Upper Grove Street. Between Upper and Lower Grove Street open at each end, Nos. 4, 5, 6, and 7, as Upper Grove Street.
..	..	1	..	..	1	1	
1	..	..	1	..	..	1	
1	..	1	..	1	..	1	
1	..	..	1	..	..	1	
35	6	17	44	4	14	61	
..	..	5	..	..	1	..	

Illness, in the meaning of the following table, is such as produces confinement to the house, and incapacity for labour or exertion. The proportion of such illness is small; and the appearance of the children, even, is very healthy, wherever there is a sufficiency of food; for they are early sent, as much as possible, out of the confined rooms of their parents, though sometimes into little, filthy, smoky, dame schools, by no means preferable; except that they have to pass through the streets to arrive at them. Others of these schools, however, are clean and fairly ventilated, and kept by persons with habits of order and propriety.

TABLE II.

*Population and State of Health of the Families of the Working Classes in St. Mary's District of St. George's in the East, north of Cable Street.*

		Well.	Ill.	Whole Population.
Number of families visited .....	1,802			
Male children under 15 .....	....	1,636	49	
Female children under 15 .....	....	1,632	28	
		3,268	77	= 3,345
Adult males .....	....	1,886	42	
Adult females .....	....	2,005	88	
		3,891	130	= 4,021
Aged and infirm males .....	....	38	15	
Aged and infirm females .....	....	60	18	
		98	33	= 131
Population not classified .....	....	....	....	= 11
Total of families, exclusive of } single men and women .....	....	7,257	240	= 7,508
Single men in families .....	88	....	....	
Single women in families .....	64	....	....	
Adult males .....	....	122	....	= 122
Adult females .....	....	67	3	= 70
Aged and infirm males .....	....	3	....	= 3
Aged and infirm females .....	....	4	4	= 8
1204 houses visited. Families....	1,954	7,453	247	= 7,711

TABLE III.  
*Country of the Heads of the Families.*

	Families.	Single Men.	Single Women.	Total Families.
London .....	857	27	29	913
England and Wales .....	622	31	21	674
Ireland .....	159	5	6	170
Scotland .....	42	....	1	43
Foreign parts .....	100	10	....	110
Not ascertained .....	22	15	7	44
Total .....	1,802	88	64	1,954

The excess of foreigners, indicated by this table, is partly attributable to some foreign sailors having their homes here, but chiefly to the sugar-bakers, being nearly all Germans; and to their credit it ought to be added, that they are a cleanly, orderly, and well-conducted body of men, chiefly worshippers at the German chapel in the neighbourhood.

The total population—men, women, and children—included in the scope of the present inquiry is here seen to be 7,711, comprised in 1,204 houses, and 1,954 families; reckoning as a separate family every one whose earnings were not thrown into some common stock, for boarding and lodging. 125 single men included in the inquiry, are thus reckoned to form 88 families; because some of them lodge together; and 78 single women and widows without incumbrance, make, in like manner, 64 families; an excess of gregariousness on the part of the men which is worthy of observation.

The economical condition of single persons of both sexes being altogether different from that of the great mass of the population, they are kept under separate heads in the following abstract, as also are 151 widows, with incumbrance, the total number in whose families amounts to 577, or nearly  $3\frac{1}{2}$  in each family, while the general average of the district is 4. The remaining 1,651 families, including 6,991 individuals, or  $4\frac{1}{4}$  individuals to each, are classified, as far as possible, according to the *occupation* of the head of each; being that circumstance which brings in its train the most numerous and most potent of the influences which affect the relative condition of all. Every occupation which had any considerable number of the heads of families engaged in it, is, in fact, separately specified in the following tables, and they are 27 in number; leaving a surplus of 396 families, including 1,663 individuals, still unclassified, under the head of miscellaneous. These, however, are all brought together in a separate sheet, similar to those in which the whole of the particulars concerning each of the other groups is abstracted. Annexed is a list of these groups, with the numbers in each, from which it will appear that the number of mere “labourers” (in great part about the docks) is alone nearly equal to all the “miscellaneous;” while of shoemakers there are 101, gunsmiths 87, carpenters 76, tailors 72, sailors 67, coopers 64, carmen 50, &c. This list is followed by a classification of the “miscellaneous,” under the heads of their several occupations.

TABLE IV.—

	Trades.	Number of Families.	Population.	Average number to each Family	Earnings of Heads of Families Classified.								Total Earnings of Heads of Families.	
					Not exceeding 10s.	11s. to 15s.	16s. to 20s.	21s. to 25s.	26s. to 30s.	31s. to 40s.	41s. and upwards.	Unknown.	£	s.
27	Labourers .....	363	1,478	4.0	30	141	103	51	17	11	6	4	5,596	6
25	Gunsmiths .....	87	384	4.4	..	2	..	3	3	24	55	..	3,635	0
14	Gunmakers .....	26	166	4.1	..	..	7	10	7	2	..	..	658	0
26	Shoemakers .....	101	393	3.9	16	26	34	16	8	1	..	..	1,766	0
17	Bricklayers .....	31	134	4.3	2	1	3	15	8	..	..	2	686	0
21	Coopers .....	64	264	4.1	1	6	15	15	22	2	2	1	1,603	0
10	Engineers .....	20	82	4.1	..	..	1	2	9	7	1	..	629	0
6	Umbrella-makers .....	11	59	5.4	..	2	2	2	2	2	1	..	292	0
18	Porters .....	34	164	4.8	3	13	10	7	..	..	..	1	561	6
20	Carmen .....	50	219	4.4	1	6	38	2	1	..	..	2	869	0
7	Butchers .....	13	60	4.6	..	3	6	1	1	..	..	2	207	0
12	Sugar-bakers .....	24	114	4.7	..	..	9	15	..	..	..	..	509	0
13	Bakers .....	26	102	3.9	2	2	15	2	1	1	..	3	425	0
15	Painters .....	28	128	4.6	1	4	3	7	8	..	..	5	541	0
9	Watermen .....	20	85	4.2	1	5	3	9	1	1	..	..	417	0
19	Smiths .....	34	135	4.0	..	..	4	25	3	1	1	..	823	0
22	Sailors .....	67	243	3.6	19	36	1	1	1	..	..	9	689	0
23	Tailors .....	72	344	4.8	6	15	25	10	11	2	3	..	1,545	9
16	Cigar-makers .....	29	115	4.0	..	2	5	3	7	7	3	2	822	0
24	Carpenters .....	76	351	4.6	4	3	8	26	28	2	1	4	1,826	0
1	Gun-stock-makers .....	7	37	5.3	..	..	..	..	4	2	1	..	256	0
4	Tin-workers .....	10	59	6.0	1	..	2	5	2	..	..	..	212	0
2	Wheelwrights .....	8	32	4.0	..	..	1	5	2	..	..	..	260	0
5	Shopmen .....	11	41	3.7	..	..	2	6	3	..	..	..	268	0
11	Policemen .....	21	86	4.1	..	..	18	3	..	..	..	..	394	10
3	Printers .....	9	44	5.0	..	..	3	5	1	..	..	..	209	0
8	Clerks .....	13	69	5.3	..	..	..	7	4	1	..	1	321	0
28	Miscellaneous .....	396	1,663	4.2	48	52	96	78	52	18	7	45	7,466	0
	Total Families .....	1,651	6,991	4.2	135	319	414	331	206	84	81	81	33,427	7
	Widows, with incumbrance and of Miscellaneous occupations .....	151	517	3.4	114	19	4	1	..	1	..	12	1,078	0
	Single Men of Miscellaneous Trades .....	88	125	1.4	6	19	23	37	10	17	5	8	2,716	6
	Single Women and Widows without incumbrance & of Miscellaneous occupations .....	64	78	1.2	63	4	..	..	..	..	..	11	458	0
	Total Families .....	1,951	7,711	4.0	518	361	441	369	216	102	86	112	37,680	1

## Occupations and Earnings.

Average Earnings of Heads of Families	Total Earnings of Subordinate members of Families.	Average Earnings of each Subordinate member of a Family.	Average Earnings of Subordinates upon the whole of the Families.	Total Earnings of Families Classified.										Total Earnings of whole.	Average Earnings of whole.
				Not exceeding 10s	11s. to 15s.	16s. to 20s.	21s. to 25s.	26s. to 30s.	31s. to 40s.	41s. and upwards.	Unknown				
s. d.	£ s.	s. d.	s. d.									£ s.	s. d.		
15 7	<sup>[290]</sup> 1,283 9	4 5	3 7	19	95	149	62	18	11	6	3	6,880 3	19 1		
41 9	<sup>[29]</sup> 303 6	10 6	3 3	..	2	..	2	1	20	62	..	3,938 6	45 3		
25 4	<sup>[6]</sup> 39 6	6 7	1 6	..	..	6	8	8	3	1	..	697 6	26 10		
17 5	<sup>[69]</sup> 325 9	4 9	3 3	12	10	30	29	12	8	..	..	2,091 9	20 8		
23 8	<sup>[17]</sup> 84 3	9 11	2 8	2	2	4	9	7	7	..	..	770 3	24 10		
25 5	<sup>[31]</sup> 182 6	5 4	2 10	2	4	11	10	21	12	4	..	1,785 6	27 11		
31 5	<sup>[6]</sup> 20 0	3 4	1 0	..	..	1	1	7	10	1	..	649 0	32 5		
26 6	<sup>[4]</sup> 28 6	7 1	2 7	..	..	..	5	3	2	1	..	320 6	29 1		
17 0	<sup>[26]</sup> 120 0	4 7	3 8	..	8	8	9	7	1	..	1	681 6	20 8		
18 1	<sup>[15]</sup> 310 6	6 11	6 3	2	4	8	25	4	5	2	..	1,179 6	23 7		
18 10	<sup>[8]</sup> 42 6	5 4	3 10	..	1	3	3	3	1	..	2	249 6	22 8		
21 3	<sup>[16]</sup> 58 0	3 0	2 5	..	..	3	18	2	1	..	..	567 0	23 7		
18 6	<sup>[16]</sup> 73 0	3 7	2 11	2	2	13	5	2	1	..	1	498 0	19 11		
23 6	<sup>[16]</sup> 86 6	5 5	3 2	3	..	7	7	7	2	1	1	627 6	23 3		
20 10	<sup>[14]</sup> 112 0	8 0	5 7	..	2	5	6	2	1	4	..	529 0	26 5		
24 3	<sup>[22]</sup> 101 6	4 7	3 0	..	..	1	16	11	4	2	..	924 6	27 2		
11 10	<sup>[32]</sup> 276 6	5 4	4 5	11	14	32	2	3	1	..	4	965 6	15 4		
21 6	<sup>[41]</sup> 221 6	5 5	3 1	3	10	19	17	9	10	4	..	1,767 3	24 6		
30 5	<sup>[17]</sup> 128 0	7 6	4 7	..	2	2	4	5	10	5	1	950 0	33 11		
25 4	<sup>[37]</sup> 226 9	6 1	3 0	5	2	5	23	25	13	3	..	2,652 9	27 0		
36 7	<sup>[3]</sup> 13 0	4 4	1 10	..	..	..	..	2	4	1	..	269 0	38 5		
21 2	<sup>[11]</sup> 85 6	7 9	8 7	..	..	1	3	3	2	1	..	297 6	29 9		
25 2	<sup>[5]</sup> 25 6	5 1	3 2	..	..	1	1	5	1	..	..	225 6	28 2		
24 4	<sup>[7]</sup> 50 6	7 2	4 7	..	..	1	4	3	2	1	..	318 6	28 11		
18 10	<sup>[17]</sup> 65 0	3 10	3 1	..	..	7	9	5	..	..	..	459 10	21 10		
23 3	<sup>[6]</sup> 25 0	4 2	2 9	..	..	2	2	4	1	..	..	234 0	25 0		
26 9	<sup>[4]</sup> 44 0	11 0	3 8	..	..	..	5	3	3	1	1	365 0	30 5		
21 3	<sup>[192]</sup> 1,142 3	5 11	3 2	37	43	76	80	73	37	16	34	8,608 3	23 9		
29 3	<sup>[1,010]</sup> 5,475 3	5 5	3 6	98	201	395	365	255	173	116	48	38,902 10	23 1		
7 9	<sup>[58]</sup> 345 9	5 11	2 5	98	26	14	4	1	1	..	7	1,423 9	9 11		
23 3	..	..	..	5	8	17	21	10	8	15	4	2,716 6	32 4		
6 10	..	..	..	50	4	1	..	1	..	..	8	453 0	8 2		
19 11	<sup>[1,068]</sup> 5,821 0	5 5	3 5	251	239	427	390	267	182	131	67	43,501 1	23 1		

TABLE V.—*Classification of the Heads of Families included under the term "Miscellaneous" in the preceding Table, according to their Occupations.*

	Families.		Families.
Agents .....	3	Brought forward.....	158
Actor.....	1	Draper .....	1
Accountant .....	1	Dairyman .....	1
Artists .....	2	Engravers .....	2
Box-makers .....	2	Excisemen .....	2
Basket and Brush-makers .....	6	Excise-officer .....	1
Boiler-makers .....	4	Fishmongers .....	6
Bedstead-makers .....	3	Foremen .....	4
Block and Last-makers .....	3	Firemen .....	3
Brass-workers .....	2	Furriers .....	2
Brass-polisher .....	1	French-polishers .....	2
Brass-founder .....	1	Founder .....	1
Brewers .....	4	Gas-workers .....	2
Bell-founder .....	1	Grocers .....	6
Boat-builder .....	1	General-dealers.....	5
Bookbinders .....	3	Gas-stoker .....	1
Builder .....	1	Glass-cutters.....	2
Broker .....	1	Gate-keeper .....	1
Brass-finisher .....	1	Ginger-beer-seller .....	1
Bell-hanger .....	1	Hatters .....	7
Boot-blocker.....	1	Hair-dressers .....	2
Bookseller.....	1	Hawkers .....	5
Chimney-sweepers .....	2	House of ill-fame .....	1
Coal-whippers or porters.....	9	In East India-house .....	1
Coachmen.....	2	In Docks .....	2
Cabmen .....	2	In Post-office .....	4
Coppersmiths .....	2	In Tower .....	1
Coachmakers .....	3	Jewellers .....	4
Costermongers .....	13	Japanners .....	2
Cabinet-makers .....	10	Ironmonger .....	1
Cellarmen .....	6	Interpreter .....	1
Corn-porters .....	2	Lamplighter .....	1
Cork-cutters .....	12	Lucifer-maker .....	1
Custom-house-officers .....	7	Milkmen .....	6
Coach-trimmer .....	1	Mathematical-instrument-makers..	4
Confectioners .....	5	Masons .....	3
Comb-makers .....	2	Maltster .....	1
Cap-maker .....	1	Millwright .....	1
Coach-plater.....	1	Millman .....	1
Carvers and gilders .....	7	Messengers .....	4
Case-maker .....	1	Marine-store .....	1
Chair-maker .....	1	Oilman .....	1
Corn-dealers .....	3	Ostlers .....	5
Chemists .....	2	Old-clothesman .....	1
Coffee-roasters .....	2	Omnibus-driver .....	1
Chair-bottomer .....	1	Opticians .....	2
Chandler's-shop .....	1	Pot-maker .....	1
Colour-maker .....	1	Plumbers .....	4
Cane-worker.....	1	Public-singer .....	1
Captains .....	3	Pencil-maker .....	1
Draymen .....	4	Plasterers .....	6
Dyers .....	3	Pewterer .....	1
Drover .....	1	Poulterers .....	2
Dock-constable .....	1	Paper-maker .....	1
Dealers .....	2	Polisher .....	1
Carried forward .....	158	Carried forward .....	283

TABLE V.—*Continued.*

	Families.		Families.
Brought forward .....	283	Brought forward .....	331
Postman .....	1	Seller of trimming .....	1
Pensioners .....	8	Ship storesman .....	1
Picture-frame-makers .....	2	Servant .....	1
Paper-hanger .....	1	Surveyor .....	1
Paviour .....	1	Turners .....	4
Publican .....	1	Toy-makers .....	2
Pew-opener .....	1	Travellers .....	2
Packers .....	2	Tanner .....	1
Riggers .....	6	Trimmer .....	1
Rope-maker .....	1	Timber-seller .....	1
Rule-maker .....	1	Tide-waiter .....	1
Satin-dresser .....	1	Vat-makers .....	2
Ship-carpenter .....	1	Weavers .....	2
Sawyers .....	10	Watchmen .....	6
Soldiers .....	2	Watchmakers .....	5
Soap-makers .....	2	Warehousemen .....	5
Scale-maker .....	1	Wire-workers .....	2
Sail-makers .....	4	Waiter .....	1
Spiceman .....	1	Trades not given .....	26
Salesman .....	1		
Carried forward .....	331	Total of Families .....	396

From the following (Table VI.), which shows the occupations, earnings, and ages of the single men, widows with incumbrance, and single women, it will be seen that the former are chiefly very young men, especially those in the trades, earning good wages; while in the two latter classes we find much greater diversity of age, with very limited means, derived from the narrow range of employments available for female hands, especially if unaccompanied by a vigorous frame and habits of bodily exertion. The extent of such employments, as compared with the number of struggling competitors for them, being always limited, their remuneration is always very low. The relative superiority of men's earnings over those of the women, and even over those of the women and children combined, in the metropolis, as compared with most of the manufacturing districts, is thus very conspicuously shown. The "distressed needlewomen," are undoubtedly a numerous class, in most parts, and especially in this part of the metropolis; unprotected women, in this district alone, being no fewer than 229, while the number of unmarried men is only 125. A glance at the tables which show their scanty earnings, and the numerous families which are dependent upon two-thirds of them, will convey a sufficient idea of the position of moral as well as pecuniary difficulty in which they are placed. Some of the women included in this class are, indeed, widowed only by the abandonment of their husbands. All, however, are living unprotected, with families dependent upon them.

All those specified as unfortunate females appear, with only a few exceptions, to be persons of respectable outward manners and conduct, for the houses of prostitution were expressly excepted from inquiry, beyond a rough enumeration of them and of their inmates, since they form a distinct feature in society, which it was not our

present purpose to investigate. Unhappily there are many houses of this description within the topographical limits of the present inquiry, frequented chiefly by sailors, low mechanics, and labourers, at least fifty coming within the observation of your Committee's agents.

TABLE VI.

*Occupations of Single Men, Single Women, and Widows with Incumbrance, showing the Number of Families and Persons to each Trade, with their Ages and Earnings.*

SINGLE MEN.							
	Families.	No.	Total Ages.	Average Age.	Total Earnings.	Average Earnings.	
					£ s.	s.	d.
Labourers .....	17	22	[16] 662	41·4	[19] 263 0	14	7
Basket-makers .....	2	3	[1] 22	22·0	[2] 39 0	19	6
Seaman .....	1	1	[2] 55	27·5	[2] 25 0	12	6
Porter .....	1	1	.... [4]	....	[1] 18 0	18	0
Coopers .....	6	12	[5] 109	27·2	[7] 269 0	24	6
Tailors .....	3	6	[9] 174	34·8	[20] 156 0	22	3
Gunsmiths .....	9	21	[4] 215	23·9	[4] 756 0	37	10
Cigar-makers .....	3	3	111	27·7	[2] 125 0	31	3
French-polishers .....	2	2	.... [12]	....	[12] 55 0	27	6
Shoemakers .....	10	13	[3] 336	28·0	[3] 242 0	20	2
Carmen .....	2	2	[1] 69	23·0	[1] 54 0	18	0
Ditto (Jobbing) .....	1	1	[1] 40	40·0	[1] 5 0	5	0
Painter .....	1	1	[1] 30	30·0	[1] 30 0	30	0
Cobler .....	1	1	65	65·0	[2] 9 0	9	0
Printers .....	2	3	.... [1]	....	[2] 48 0	24	0
Boiler-makers .....	2	2	19	19·0	[1] 49 0	24	6
Butcher .....	1	1	.... [3]	..	[4] 15 0	15	0
Carpenters .....	3	3	130	43·3	95 0	23	9
Carried forward .....	67	98	[63] 2,037	....	[94] 2,253 0	....	....

TABLE VI.—Continued.

SINGLE MEN.						
	Families.	No.	Total Ages.	Average Age.	Total Earnings.	Average Earnings.
					£ s.	s. d.
Brought forward .....	67	98	[63] 2,037	....	[94] 2,253 0	....
Pensioners (one works as a Labourer) .....	3	4	[2] 135	67·5	[1] 6 0	6 0
Dyer .....	1	1	[1] 30	30·0	[1] 25 0	25 0
Chair-makers .....	2	2	[2] 53	26·5	[2] 42 0	21 0
Bookbinder .....	....	1	[1] 19	19·0	[1] 12 0	12 0
Ironmonger .....	....	1	[1] 19	19·0	[1] 12 0	12 0
Sugar-bakers .....	2	3	[3] 67	22·3	[3] 68 0	22 8
Mathematical-instrument-maker .....	1	1	[1] 22	22·0	[1] 30 0	30 0
Smith .....	1	1	[1] 28	28·0	[1] 24 0	24 0
Costermonger .....	1	3	[3] 68	22·7	[3] 30 0	10 0
Hair-dresser .....	1	1	[1] 25	25·0	[1] 25 0	25 0
Map-mounter .....	1	1	[1] 40	40·0	[1] 25 0	25 0
Hatter .....	1	1	[1] 22	22·0	[1] 25 0	25 0
Cap-maker .....	1	1	[1] 23	23·0	[1] 21 0	21 0
Glass-cutter .....	1	1	[1] 21	21·0	[1] 18 0	18 0
Clerk .....	1	1	[1] 36	36·0	[1] 31 6	31 6
Engineer .....	1	1	[1] 20	20·0	[1] 30 0	30 0
Ragman .....	1	1	....	....	[1] 6 0	6 0
Broker .....	1	1	....	....	[1] 33 0	33 0
Trade unknown .....	1	1	....	....	....	....
Total .....	88	125	[85] 2,665	31·3	[117] 2,716 6	23 3

TABLE VI.—Continued.

## SINGLE WOMEN AND WIDOWS.

	Families.	No.	Total Ages.	Average Age.	Total Earnings.	Average Earnings.
					s. d.	s. d.
Unfortunate females .....	3	5	....	....	10 0	10 0
			[1]		[1]	
Straw-bonnet-maker .....	1	1	45	45·0	15 0	15 0
			[1]		[2]	
Schoolmistresses .....	2	3	68	68·0	11 0	5 6
			[3]		[3]	
Do., working also with the } needle .....	1	3	105	35·0	20 0	6 8
			[33]		[41]	
Needlewomen .....	33	41	1,282	38·8	238 0	5 9
			[1]		[1]	
Tailoress .....	1	1	30	30·0	6 0	6 0
			[5]		[5]	
Charwomen .....	4	4	287	57·4	29 0	5 9
			[1]		[1]	
Laundress .....	1	1	65	65·0	8 0	8 0
			[1]		[1]	
Gun-polisher .....	1	1	18	18·0	10 0	10 0
			[2]		[2]	
Dress-makers .....	2	2	62	31·0	25 0	12 6
			[1]		[1]	
Nurse .....	1	1	52	52·0	10 0	10 0
			[1]		[1]	
Stay-maker .....	1	1	36	36·0	9 0	9 0
			[2]		[2]	
Mangle-keepers .....	2	2	85	42·5	17 0	8 6
			[1]		[1]	
General shop .....	1	1	39	19·5	10 0	10 0
			[1]		[1]	
Shoebinder .....	1	1	42	21·0	5 0	5 0
					[1]	
Shirt-maker .....	1	1	....	....	15 0	15 0
Slop workers .....	1	2	....	....	....	....
			[1]		[1]	
Yeast-maker .....	1	1	65	65·0	10 0	10 0
Coal-wharf-keeper .....	1	1	....	....	....	....
			[1]		[1]	
Waistcoat-maker .....	1	1	25	25·0	10 0	10 0
			[2]			
Supported by friends .....	3	3	143	71·5	....	....
			[1]			
Uncertain .....	1	1	74	74·0	....	....
Total .....	64	78	[59] 2,523	42·8	[67] 458 0	6 10

TABLE VI.—*Continued*.

WIDOWS WITH INCUMBRANCE.						
	Families.	No.	Total Ages.	Average Age.	Total Earnings.	Average Earnings.
					<i>s. d.</i>	<i>s. d.</i>
Greengrocer.....	1	2	[1] 37	37·0	....	....
Fishmonger .....	1	5	[1] 57	57·0	....	....
Schoolmistresses .....	3	7	[2] 72	36·0	[2] 13 0	6 6
Washerwomen .....	11	41	[11] 551	50·1	[11] 110 6	10 6
Needlewomen .....	54	179	[54] 2,418	44·8	[54] 524 0	9 8
Tailoresses .....	3	9	[2] 100	50·0	[3] 23 0	7 8
Charwomen .....	20	77	[20] 926	46·3	[20] 157 3	7 10
Laundresses.....	13	50	[13] 665	51·1	[12] 172 0	14 4
Silk-winder .....	1	6	[1] 49	49·0	[1] 11 0	11 0
Dress-makers .....	2	8	[1] 43	43·0	[2] 34 0	17 0
Nurses .....	2	5	[2] 96	48·0	[2] 21 0	10 6
Mattress-maker .....	1	5	[1] 36	36·0	[1] 10 0	10 0
Mangle-keepers .....	6	19	[5] 245	49·0	[6] 49 0	8 2
Shopkeepers .....	6	16	[6] 251	41·8	[5] 47 0	9 5
Chandler's shop .....	1	2	[1] 61	61·0	....	....
Shirt-makers .....	3	8	[3] 103	36·0	[3] 14 0	4 8
Slop-workers .....	4	15	[4] 135	33·7	[4] 12 6	3 2
Coffee shop .....	1	4	[1] 30	30·0	[1] 20 0	20 0
Market servants .....	1	2	[1] 50	50·0	[1] 5 0	5 0
Waistcoat-makers .....	3	8	[3] 103	34·3	[3] 32 0	16 0
Supported by friends or chil- dren .....	13	47	[12] 602	50·1	[12] 168 6	14 0
Pew-opener .....	1	2	[1] 60	60·0	....	....
<b>Total .....</b>	<b>151</b>	<b>517</b>	[146] 6,695	45·9	[143] 1,423 9	9 11

TABLE VII.—Rents of Dwellings.

Trades.	Number of Families.	Average Earnings of each Family.	Weekly Rents paid by Families.															Paying no Rent, whether as Proprietors or otherwise.	Not ascertained.	Total Rents Weekly.	Average Rents per Week.			
			1s. to 1s. 6d.	1s. 6d. to 2s.	2s. to 2s. 6d.	2s. 6d. to 3s.	3s. to 3s. 6d.	3s. 6d. to 4s.	4s. to 4s. 6d.	4s. 6d. to 5s.	5s. to 5s. 6d.	5s. 6d. to 6s.	6s. to 6s. 6d.	6s. 6d. to 7s.	7s. to 7s. 6d.	7s. 6d. to 8s.	8s. to 10s.					10s. to 20s.		
27 Labourers .....	363	19 1	34	73	60	42	29	38	22	29	2	9	4	2	1	2	3	2	..	4	1	328	11	3
25 Gunsmiths* .....	87	45 3	..	4	9	8	11	19	6	10	6	2	2	1	4	..	..	..	..	..	2	349	5	1
14 Gun-makers* .....	26	26 10	..	1	7	1	3	1	2	2	4	1	1	1	1	1	1	..	..	..	..	111	8	4
26 Shoemakers .....	101	20 2	6	11	19	12	14	10	10	2	2	1	3	2	1	1	1	..	..	..	1	350	5	3
17 Bricklayers .....	31	24 10	3	3	4	3	4	4	1	5	..	..	..	3	1	1	1	..	..	..	..	117	9	3
21 Coopers .....	64	27 11	2	4	13	10	5	8	3	9	4	2	1	1	..	..	..	..	..	2	..	228	0	3
10 Engineers .....	20	32 5	1	1	3	4	1	5	1	1	..	..	..	..	..	1	..	..	..	..	64	0	3	
6 Umbrella-makers .....	11	29 1	..	1	..	1	2	1	2	2	..	..	..	..	..	2	..	..	..	..	61	0	1	
18 Porters .....	34	20 2	3	3	5	4	5	6	1	4	..	3	..	..	..	..	2	..	..	..	118	6	3	
20 Carmen .....	50	23 7	2	5	9	6	9	4	5	4	..	1	2	..	..	2	1	..	..	..	186	1	3	
7 Butchers .....	13	22 2	..	2	1	..	3	2	2	2	1	..	..	..	..	..	..	..	..	..	13	49	0	
12 Sugar-bakers .....	24	23 7	..	1	4	3	2	5	3	3	..	..	1	1	1	..	..	..	..	..	96	6	4	
13 Bakers .....	26	19 11	1	6	3	2	2	5	..	1	..	..	2	1	1	1	1	1	..	..	95	2	3	
15 Painters .....	28	23 3	3	3	7	1	4	3	..	1	..	..	2	2	1	..	1	..	..	1	94	6	3	
9 Watermen .....	20	26 5	..	3	5	1	3	2	1	1	2	..	1	..	1	1	1	..	..	..	73	5	3	



The wages are seen to vary (Table VI.), as usual, with the degree of skill required in the several trades; the lowest being those of the sailors, 11*s.* 10*d.* per week besides rations, and of the mere labourers, 15*s.* 7*d.* per week, on the average; the highest, those of the gunsmiths, 41*s.* 9*d.* per week; the general average being 20*s.* 2*d.* per week. Including the earnings of all the family, the incomes of the sailors average 15*s.* 4*d.* per week, of the labourers 19*s.* 1*d.*, and of all the rest, various sums between 20*s.* and 40*s.*, with the exception of the gunsmiths, whose total emoluments, per family, average 45*s.* 3*d.* per week. Necessity, on the one hand, in the poorer trades, and opportunity, on the other, in some of the better paid, cause the amount of subordinate earnings to equalize each other in the families of some of the men who earn, themselves, a very unequal amount of wages; while those unmoved by either peculiar necessity or peculiar opportunity, show least of pecuniary advantages derived from the labour of women and children. In a few cases, the earnings of a grown-up son give an excess which disturbs the average from its usual value as an index to the earnings of women and children, and it must carefully be borne in mind that there may be the most industry, and that of the most appropriate kind, in those families whose subordinate members add little or nothing to their pecuniary resources; for the labours and cares of the little household, in homes which can afford the employment of only casual if any domestic service, are quite sufficient to occupy all available time and ability in their proper discharge. In the case of the tailors, the proportion of the wife's earnings is greater than would appear from the table, because the females assist the men in the work, for which payment is entered under the head of the husband's wages; but, in all other cases, the additional sums are drawn from the sources indicated in the case of the unprotected women.

The preceding table (VII.) shows, in comparison with the average earnings of the families in each trade, their weekly payments for rent, carefully classified; the next following shows the number of rooms occupied by the families, and the number of persons to a room; while a third states the number of beds possessed by each, and the number of cases where there are one, two, three, or any greater number of persons to a bed. The only remarkable result is the moderate degree of crowding which prevails throughout the population. It is greatest, of course, in the families having only one room, with several little children, but it steadily decreases as each class increases in the number of its rooms and its beds, showing that this is a population entirely above the wretched system of sub-letting corners of the same room, which occasions such an accumulation of wretchedness, barbarism, and disease, in the few localities to which the rudest and most unsettled of the population resort. Want of space and ventilation in the rooms is, however, observed generally, and everyone can conceive how unfavourable it is to domestic quiet to have only one room for every purpose of repose and the *ménage*. Indeed, the possession of only one room, indicates a depression of habits and of health, which, if every grosser feature of misery were removed, would well deserve the solicitude of the philanthropist; the provision of a second room in town-life being as marked a step as the advancement from a hovel to a proper cottage in the country.

TABLE VIII.—*Number of Rooms occupied by each Family.*

Trades.	Number of Families.	Average Earnings of Families.	One Room.			Two Rooms.			Three Rooms.			Four Rooms.			Five Rooms.			Six Rooms.			Not Ascertained.		Total Given.		Persons to a Room.
			No. of Families.	Population.	No. of Persons to a Room.	No. of Families.	Population.	No. of Persons to a Room.	No. of Families.	Population.	No. of Persons to a Room.	No. of Families.	Population.	No. of Persons to a Room.	No. of Families.	Population.	No. of Persons to a Room.	No. of Families.	Population.	No. of Persons to a Room.	No. of Families.	Population.	No. of Families.	Population.	
27 Labourers .....	363	19 1	169	542	32	103	479	23	72	371	17	17	82	31	1	1	1	1	1	1	1	1	363	1,475	22
28 Gunsmiths .....	87	3 3	16	50	31	31	139	22	27	126	15	12	63	13	1	1	1	1	1	1	1	1	87	381	18
29 Shoemakers .....	26	26 10	37	123	33	58	153	20	20	87	15	5	24	12	1	1	1	1	1	1	1	1	101	393	20
30 Bricklayers .....	31	24 10	11	34	17	10	34	17	8	31	21	1	5	10	1	1	1	1	1	1	1	1	31	131	21
31 Cooks .....	64	27 10	15	44	29	23	92	20	22	111	16	4	17	10	1	1	1	1	1	1	1	1	64	261	18
32 Engineers .....	20	32 5	8	29	36	4	15	18	5	38	15	...	...	...	1	1	1	1	1	1	1	1	20	82	20
33 Umbrella-makers .....	11	29 1	1	2	20	3	14	23	3	29	19	...	...	...	1	1	1	1	1	1	1	1	11	59	17
34 Porters .....	31	20 8	13	54	41	9	54	30	11	52	15	1	4	10	...	...	...	...	...	...	...	...	34	161	21
35 Carmen .....	50	23 7	19	57	30	11	28	20	6	13	21	1	9	22	...	...	...	...	...	...	...	...	50	219	21
36 Butchers .....	13	22 8	3	10	33	7	28	20	13	72	18	2	8	15	1	1	1	1	1	1	1	1	13	60	22
37 Sugar-bakers .....	24	23 7	2	5	22	7	29	20	13	72	18	2	8	15	1	1	1	1	1	1	1	1	24	114	17
38 Bakers .....	26	19 11	9	25	27	12	57	23	3	8	13	2	8	10	...	...	...	...	...	...	...	...	26	102	19
39 Painters .....	24	23 3	11	31	28	14	77	27	3	20	22	...	...	...	...	...	...	...	...	...	...	...	28	128	26
40 Watermen .....	20	26 5	8	24	30	4	14	17	8	17	20	...	...	...	...	...	...	...	...	...	...	...	20	83	21
41 Sailors .....	31	27 2	13	36	27	14	53	19	5	34	22	1	4	10	1	1	1	1	1	1	1	1	31	135	20
42 Smiths .....	67	15 4	28	93	33	57	97	18	9	40	14	...	...	...	3	13	8	...	...	...	...	...	67	243	19
43 Tailors .....	72	24 6	23	66	31	23	128	16	9	111	18	7	33	13	...	...	...	1	6	10	...	...	72	314	21
44 Cigar-makers .....	29	33 11	6	15	25	11	36	16	9	15	16	...	...	...	...	...	...	...	...	...	...	...	29	115	16
45 Carpenters .....	76	27 0	13	39	30	30	136	22	19	104	18	13	70	13	...	...	...	1	2	3	...	...	76	351	18
46 Gun-stock-maker .....	7	38 5	2	8	40	4	19	23	3	...	...	...	...	...	1	10	20	...	...	...	...	...	7	37	21
47 Tin-workers .....	10	29 9	2	8	40	3	19	31	3	16	17	2	16	20	...	...	...	...	...	...	...	...	10	59	23
48 Wheelwrights .....	8	28 2	4	9	45	4	16	20	1	1	0	...	...	...	...	...	...	...	...	...	...	...	8	32	13
49 Shoemen .....	21	31 10	5	15	30	13	57	23	4	14	13	...	...	...	...	...	...	...	...	...	...	...	11	41	17
50 Policemen .....	9	36 0	1	4	40	6	31	22	5	9	15	...	...	...	...	...	...	...	...	...	...	...	9	46	21
51 Clerks .....	13	30 5	7	6	60	2	9	32	3	11	12	6	40	17	...	...	...	...	...	...	...	...	9	44	23
52 Miscellaneous .....	396	23 9	119	387	32	104	437	21	107	495	15	44	246	14	6	28	9	1	3	5	...	...	13	69	15
Total Families .....	1,651	24 5	551	1,765	32	526	2,316	22	404	2,014	17	130	708	14	16	86	11	17	76	7	7	25	1,614	6,965	20
Widows with incumbency .....	151	9 11	85	260	31	36	138	19	19	76	13	7	32	11	4	11	5	...	...	...	...	...	151	517	19
Total Families, exclusive of single Men and Women lodgers .....	1,802	23 1	636	2,025	32	562	2,454	22	423	2,090	17	137	740	14	20	97	9	17	76	7	7	25	1,795	7,482	20

TABLE IX.—Number of Beds to a Family.

Trades.	Number of Families.	Average Earnings of Families.	One Bed.			Two Beds.			Three Beds.			Four Beds.			Five Beds.			Not ascertained.		Total given.		Persons to a Bed.
			No. of Families.	Population.	No. to a Bed.	No. of Families.	Population.	No. to a Bed.	No. of Families.	Population.	No. to a Bed.	No. of Families.	Population.	No. to a Bed.	No. of Families.	Population.	No. to a Bed.	No. of Families.	Population.	No. of Families.	Population.	
27. Labourers.....	383	19 1/2	141	387	2.7	160	779	2.4	14	90	2.1	...	...	...	...	...	...	46	922	317	1,326	2.6
28. Gunsmiths.....	87	45 3	14	34	2.4	38	163	2.1	8	50	2.1	...	...	...	...	...	...	27	137	60	247	2.6
29. Gunmakers.....	26	26 10	15	47	3.1	10	52	3.6	1	8	2.1	...	...	...	...	...	...	10	50	91	313	2.8
30. Shoemakers.....	101	20 8	43	119	2.6	39	186	2.3	7	39	1.8	...	...	...	...	...	...	10	50	91	313	2.8
31. Bricklayers.....	31	24 10	12	30	2.5	12	58	2.4	3	26	2.5	...	...	...	...	...	...	4	23	27	111	2.3
32. Coopers.....	64	27 11	21	53	2.5	34	133	2.2	1	6	2.0	...	...	...	...	...	...	8	52	56	112	2.3
33. Engineers.....	20	32 5	8	19	2.3	10	50	2.5	1	7	2.3	...	...	...	...	...	...	1	6	19	76	2.5
34. Umbrella-makers.....	11	29 1	2	6	3.0	6	29	2.4	2	16	2.6	...	...	...	...	...	...	1	8	10	51	2.5
35. Porters.....	34	20 8	11	34	3.1	18	99	2.7	2	16	2.6	...	...	...	...	...	...	1	8	10	51	2.5
36. Carmen.....	20	23 7	16	36	2.2	15	75	2.5	5	33	2.3	...	...	...	...	...	...	13	66	37	133	2.3
37. Butchers.....	13	23 7	7	17	2.4	4	19	3.3	1	8	2.6	...	...	...	...	...	...	4	20	22	82	2.3
38. Sugar-bakers.....	24	23 7	7	17	2.4	11	59	2.6	2	15	2.5	...	...	...	...	...	...	4	20	22	82	2.3
39. Bakers.....	26	19 11	15	41	2.9	7	38	2.7	2	15	2.5	...	...	...	...	...	...	4	20	22	82	2.3
40. Painters.....	52	23 3	13	31	2.6	15	94	3.1	2	11	2.3	...	...	...	...	...	...	4	20	22	82	2.3
41. Watermen.....	20	26 5	8	21	2.6	6	33	1.9	2	11	2.3	...	...	...	...	...	...	4	20	22	82	2.3
42. Smiths.....	34	27 2	11	34	2.4	7	33	2.3	2	11	2.3	...	...	...	...	...	...	4	20	22	82	2.3
43. Sailors.....	67	14 4	31	100	2.9	26	113	2.1	2	26	2.1	...	...	...	...	...	...	4	20	22	82	2.3
44. Tailors.....	72	21 6	22	62	2.8	34	177	2.6	6	47	2.6	...	...	...	...	...	...	5	17	62	226	2.4
45. Cigar-makers.....	29	33 11	7	19	2.7	15	54	1.8	2	13	2.1	...	...	...	...	...	...	10	58	62	286	2.6
46. Gun-stock-makers.....	76	27 0	23	69	3.0	32	150	2.3	8	55	2.2	...	...	...	...	...	...	5	29	21	86	2.6
47. Tin-workers.....	7	38 5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	13	77	63	274	2.6
48. Wheelwrights.....	8	28 2	3	7	2.3	5	28	2.8	2	13	2.1	...	...	...	...	...	...	5	29	21	86	2.6
49. Shoemen.....	21	28 14	9	29	3.2	5	19	1.9	1	7	2.3	...	...	...	...	...	...	1	6	7	26	2.6
50. Policemen.....	11	21 10	9	29	3.2	5	19	1.9	1	7	2.3	...	...	...	...	...	...	2	12	9	29	2.6
51. Printers.....	9	36 0	1	4	4.0	5	23	2.3	...	...	...	...	...	...	...	...	...	3	17	6	27	2.6
52. Clerks.....	13	30 3	2	5	2.5	5	23	2.3	...	...	...	...	...	...	...	...	...	3	17	6	27	2.6
53. Miscellaneous.....	336	23 9	167	479	2.8	138	632	2.3	2	177	2.1	...	...	...	...	...	...	57	310	339	1,352	2.4
Total Families.....	1,651	24 5	619	1,709	2.8	671	3,227	2.4	101	666	2.2	6	42	1.7	1	11	...	250	1,355	1,401	5,055	2.46
Widows with incubance.....	151	9 11	86	241	2.8	54	228	2.1	3	20	2.2	...	...	...	...	...	...	8	98	143	189	2.4
Total Families, exclusive of Single Men and Women Lodgers.....	1,502	23 1	705	1,950	2.8	728	3,155	2.4	104	686	2.2	6	42	1.7	1	11	...	258	1,363	1,544	6,114	2.45

TABLE X.—Food, Clothing, Furniture, and Cleanliness.

Trades.	Number of Families.	Average Earnings of Families.	Number of Times the Families have Animal Food in the Week.						Clothing.				Rooms—How Furnished.			Whether Cleansed.						
			Once.	Twice.	Three Times.	Four.	Five.	Six.	Seven.	Not Ascer- tained.	Sufficient and Clean.	Insufficient but Clean.	Sufficient but Dirty.	Insufficient and Dirty.	Not Ascer- tained.	Well.	Scantily.	Badly.	Not Ascer- tained.	Well.	Tolerably.	Badly.
27 Labourers .....	363	19 1	68	62	68	42	8	19	13	64	177	10	36	6	62	265	76	20	123	146	75	19
28 Gunsmiths .....	87	45 3	28	10	4	10	1	3	72	4	81	4	1	1	52	24	1	10	68	8	1	10
29 Gunmakers .....	26	26 10	15	1	3	10	1	3	6	26	40	42	19	1	26	50	26	4	15	15	4	1
30 Shoemakers .....	101	20 8	33	19	3	19	1	8	7	42	49	13	1	1	22	56	5	4	32	38	27	4
31 Bricklayers .....	31	24 10	2	3	1	3	1	8	4	6	15	1	2	1	9	16	3	1	12	15	3	1
32 Coopers .....	64	27 11	3	7	1	10	1	9	13	8	17	1	10	1	23	36	11	1	31	22	11	1
33 Engineers .....	20	32 5	3	1	1	1	1	1	10	1	16	4	1	1	8	3	1	1	13	6	1	1
34 Umbrella-makers .....	11	29 1	1	4	9	12	1	1	3	5	9	2	1	1	8	3	1	1	13	3	1	1
35 Porters .....	34	20 8	4	4	9	1	1	1	2	3	16	13	1	1	10	19	4	1	13	14	6	1
36 Carmen .....	50	23 8	6	5	9	8	1	1	1	7	33	15	1	1	15	29	1	5	28	16	1	1
37 Butchers .....	13	22 7	1	1	3	2	1	1	1	1	6	5	1	1	5	6	1	1	9	2	1	1
38 Sugar-bakers .....	24	23 7	1	1	9	2	1	2	4	4	15	5	1	1	10	12	1	1	14	9	1	1
39 Bakers .....	26	19 11	4	3	3	2	1	3	3	4	13	10	1	1	7	14	3	2	11	11	4	1
40 Painters .....	28	23 3	5	3	3	3	1	9	3	2	11	12	1	1	9	14	3	1	10	14	4	1
41 Watermen .....	20	26 5	2	4	3	3	1	1	4	6	12	7	1	1	8	9	3	3	10	7	3	1
42 Smiths .....	34	27 2	1	3	3	3	1	11	4	10	22	7	1	1	6	21	3	4	13	13	4	1
43 Sailors .....	67	15 4	17	16	12	6	1	4	5	9	39	30	1	1	18	39	8	1	27	31	7	1
44 Tailors .....	72	24 6	12	14	6	1	2	7	20	10	32	28	1	1	18	33	20	1	16	25	20	1
45 Cigar-makers .....	29	33 11	1	3	7	7	4	14	10	5	18	5	3	1	12	11	4	2	17	4	6	1
46 Carpenters .....	76	27 0	7	8	8	7	4	17	13	51	18	1	5	1	37	31	6	2	44	23	7	1
47 Gun-stock-makers .....	7	38 5	1	2	1	1	1	2	1	2	7	1	1	1	3	5	3	2	1	4	1	1
48 Tin workers .....	10	29 9	1	1	1	1	1	2	1	4	3	6	1	1	3	5	3	1	3	4	4	1
49 Wheelwrights .....	8	28 2	1	1	1	1	1	4	1	2	6	1	1	1	9	2	2	1	4	4	1	1
50 Shopmen .....	11	28 11	1	4	1	7	1	4	5	2	11	8	2	1	3	5	13	3	11	11	2	1
51 Policemen .....	21	21 10	1	1	4	3	1	1	6	2	11	8	2	1	9	2	1	1	4	4	2	1
52 Printers .....	9	26 0	1	1	1	1	1	1	1	6	7	5	1	1	5	4	1	1	8	3	1	1
53 Clerks .....	13	30 5	1	1	1	3	1	1	1	6	13	1	1	1	12	1	1	1	6	3	1	1
54 Miscellaneous .....	396	23 9	46	57	38	15	39	102	66	213	131	6	37	9	142	184	55	15	181	145	56	14
Total Families .....	1,651	24 5	177	264	187	33	182	329	281	870	578	29	147	27	527	806	213	75	747	586	245	73
Widows with incumbrance .....	151	9 11	68	21	27	13	1	3	13	48	81	5	15	2	23	83	41	4	44	66	36	5
Single Men .....	88	32 4	1	1	1	1	14	31	38	49	2	1	5	31	6	8	6	68	9	4	6	6
Single Women & Widows without incumbrance .....	64	8 2	25	8	2	4	1	1	6	18	28	21	1	3	11	9	28	10	21	18	8	17
Total Families .....	1,651	23 1	292	209	296	35	199	368	350	495	652	36	170	71	565	925	300	164	821	674	295	164

The average rent is seen to be no less than 3s. 7d. per week, or 9l. 6s. 4d. per year, which, on the total number of families (1,954), gives the enormous sum of 18,204l. 16s. 8d. The present Committee, in relation to this subject, would earnestly recal the attention of the Members of the Society to the practical suggestion contained in the Report of their Committee on the state of the working classes in the parishes of St. Margaret and St. John, Westminster, read at the Ordinary Meeting of the Society on the 16th of March, 1840, and which has already been the source of much good in the origination of societies for the improvement of the dwellings and the lodging-houses of the labouring classes, and offers a test from which yet more enlarged practical deductions might be drawn, at a time when express provisions for the physical and moral health of our vast urban populations are at length recognised as a part of the public policy of the empire.

“High rents are an evil of a practical nature from which the labouring classes are severely suffering; and a sufficient proof of this circumstance is afforded in the fact that large numbers of the families of the working population continue to reside, for months and years together, crowded within miserable dwellings, consisting of a single room, of very moderate size, for each family.

“As a remedy for such an obvious grievance, the Committee are desirous to show the advantage which may be derived from the outlay of a moderate amount of capital, in the erection of buildings containing sets of rooms suited to the accommodation of labouring families, in properly selected situations. For these dwellings, weekly rents should be required from the tenants, and a profit may, in this manner, be reasonably expected from capital judiciously invested, while advantages of still greater importance, both physical and moral, would be gained to society, from the removal of a serious cause of discontent among the working classes, and from the provision of a more correct and convenient arrangement of their household comforts, which may materially assist in the foundation of a superior moral character for the working population.”

The state of these poor families, with regard to food, clothing, furniture, and cleanliness, is described in Table X. There seems to be indicated by the column showing the consumption of animal food, a classification into poor and sufficient feeding; the former being very clearly indicated by the two columns which represent those who obtain animal food only once or twice a week; being about one-fourth of the whole. None appeared to be over-fed. The state of the clothing is, in one sense more satisfactory; for while it is described as *sufficient* in 1,031 cases, and *insufficient* in 852, it is described as *dirty* in only 36 of the former cases, and 170 of the latter. The distribution of these latter numbers chiefly among the poorer occupations will be seen at a glance. Only 300 are returned as having rooms *ill furnished*, while 565 have rooms *well furnished*, but a number greater than both of these combined (925) are described as having only *scanty* furniture; terms which are tolerably expressive to those accustomed to visit the habitations of the poor. Ill furnished dwellings are those in which there are only a wretched bedstead, or a bed on the floor, a few broken chairs, and a table worth only a shilling or two, besides, perhaps, a box or chest, with a few paper

pictures about the walls. Scantly furnished dwellings are those which contain a few chairs, a deal table, a flock bed, and a few cooking utensils, altogether indicating a struggle towards neatness, though scarcely towards comfort. While the dwellings described as well furnished, had, perhaps, a chest of drawers, a clock, really good tables, a carpet, mahogany chairs, and every article essential to comfort, and some even of luxury, such as a piano, violins, and other musical instruments, with foreign productions of curiosity, &c.

The rooms are badly cleaned in a greater number of cases than the clothing, viz., in 295, and in 674 they are but tolerably clean. Still, in one-half of the cases ascertained (821), they are described as well cleaned. The excess of inferior habits in the lower occupations will be traced generally. The casual dock labourers appear to be in the lowest condition, in proportion even to their poor means; while those whose homes are most comfortable, in proportion to their earnings, are, undoubtedly, the German sugar-bakers, and the mates of vessels, with only a part of the gunsmiths; others throwing away all the advantages of their superior earnings by thriftless habits.

Some evidence as to the religious and moral character of the people will be conveyed by the table which describes their profession of religion, the newspapers and periodical publications which they read, and the character of the books and pictures found in their apartments.

TABLE XI.

*Religious Profession of Heads of Families.*

Religious Profession.	Heads of Families.
Church of England .....	1,328
Wesleyan Methodists .....	64
Other Denominations of Dissenters.....	177
Roman Catholics .....	168
Jews .....	35
No religion .....	152*
Not ascertained.....	30
Total .....	1,954

\* Under this head are included one or two Mahomedans.

This extensive profession of attachment to the Gospel is a hopeful sign, though the limited extent to which the Wesleyans and other denominations of Dissenters, appear to have penetrated into this mass of population, is rather remarkable, and will justify a feeling of doubt with regard to the profession made by some of belonging to the Established Church.

There is reason to believe, however, that the above statement gives a very fair representation of the results which would be arrived at amidst large bodies of the working classes, whether in town or country; though a different result would probably be shown in the manufacturing districts.

The following are the periodical publications in use among the population:—

TABLE XII.  
*Newspapers Read by the Families visited.*

	Families.	Single Men.	Single Women.	Total Families.
Times .....	22	....	....	22
Advertiser .....	284	23	....	307
Dispatch .....	327	27	....	354
Lloyd's Gazette .....	476	38	....	514
Sunday Times .....	9	....	....	9
Watchman .....	1	....	....	1
Railway Bell .....	1	....	....	1
Nonconformist.....	2	....	....	2
Bell's Life .....	4	....	....	4
Cleave's Gazette .....	1	....	....	1
National .....	2	....	....	2
Builder.....	1	....	....	1
News of the World.....	1	....	....	1
Family Herald.....	1	....	....	1
Birmingham Herald.....	1	....	....	1
Various.....	10	....	....	10
Not reading Papers.....	29	....	....	29
Not ascertained .....	630	....	64	694
Total.....	1,802	88	64	1,954

This is not a cheering picture; the great use made of the capacity to read being, so far as this statement indicates, in ministering to mere excitement. Out of 1,260 cases in which the circumstances with regard to reading were ascertained, it was wholly in "Lloyd's Gazette," the "Weekly Dispatch," and the "Advertiser," in every case, except 22 in which the "Times" is read, 34 in which other miscellaneous prints are taken in, and only 29 in which no newspaper whatever is read.



The classification of the books and pictures found in the houses, which has been adopted in the accompanying table, has been made in deference to a former classification in like inquiries. The head "Miscellaneous" is designed to include the miscellaneous books, chiefly of narrative, and seldom of "useful knowledge," which are found in the houses of the poorer classes, distinct from the books of religion and morality comprised under the name of "serious," and the melodramatic works which, chiefly, are designated by the term "theatrical." The total number of books found in the district was no less than 13,992, giving an average of upwards of 11 for each of the families in which they were found; 564 appearing to be without books of any kind; a proportion upwards of one-fourth of the total number. Only 58 books were found to be theatrical, while 5,791 are classed as serious, and 8,153 as miscellaneous. The former were found in only 18 families of the whole number visited, while all three classes were found in 9 of these; serious as well as theatrical in 5 more of them; and miscellaneous as well as theatrical in another; leaving but 3 in which theatrical books only were found. Both serious and miscellaneous books were found in 736 families; serious books only in 573; and miscellaneous books only in 63. The possession of books is, in fact, almost universal; and in the families in which each kind of books was found at all, therefore, there were, on an average, 4 serious, 10 miscellaneous, and 3 theatrical. The extent to which the habit of reading prevails, challenges, therefore, still more minute investigation into the direction given to it, an investigation which should extend to some simple observation upon the apparent *use*, as well as the actual possession, of the books, and a yet further classification of them. It is more than one-fourth of the houses which are without "serious" books, under which name are generally included the Holy Scriptures and books of prayer; and to what extent these are really used it must be impossible to ascertain statistically, but it would be very important to determine whether or not they appeared to be most used in the houses where they were accompanied by an equal or perhaps greater proportion of miscellaneous books. The impression of the agents is, that, in far the greater number of families which they visited, of all the books which they found in them, the "Bible" and "Testament" were those least read.

The decoration of the walls with pictures prevails to nearly the same degree as the possession of books of some kind. The total number of pictures observed was no fewer than 9,443, of which 7,730 had miscellaneous, 1,253 serious, and 460 theatrical subjects; the proportions of the miscellaneous and theatrical being greater in the pictures than in the books; the numbers of each kind in the families where they were found at all, averaging, of the serious 2, of the theatrical 3, and of the miscellaneous 6. These numbers give upwards of 8 to a family, in the case of all the families indulging in this sort of decoration. In the abodes of 75 families were found pictures of all these denominations; in 364, serious and miscellaneous pictures; in 711, miscellaneous pictures only; in 74, miscellaneous and theatrical; in 42, pictures on religious subjects only; in 14, on theatrical subjects only; in 3, on both serious and theatrical subjects. In 671, or one-third of the abodes, there was no decoration whatever by

pictures. Those usually found were little paper prints, tricked out in glaring colours, and enclosed in little black frames of wood; while a few, especially the marine prints, were really good.

One very gratifying fact is, that 622, or upwards of one-third of the heads of families are connected with Benefit Societies. On the other hand, however, 50 families were in the actual receipt of gratuitous medical relief.

TABLE XIV.

*Families Receiving Gratuitous Medical Aid; and Heads of Families Connected with Friendly Societies.*

	Families.	Single Men.	Single Women.	Total Families.
Receiving gratuitous Medical aid	50	....	....	50
Balance of Families .....	1,752	....	....	1,752
Total .....	1,802	....	....	1,802
Connected with Friendly Societies	622	54	1	677
Balance of Families .....	1,180	34	63	1,277
Total .....	1,802	88	64	1,954

Again, the great length of time which a large proportion of them have occupied their present habitations, indicates, in the main, a steadiness of character which is worthy of observation, if we take into account the large proportion of forced migration which attaches to a number of the trades; if only from one part of the town to another.

TABLE XV.

*Length of Time which the Heads of Families have Resided in their Present Dwellings.*

	Families.	Single Men.	Single Women.	Total Families.
From 1 week to 4 weeks .....	60	3	2	65
„ 1 month to 6 months .....	369	10	12	391
„ 6 „ 1 year .....	270	17	13	300
„ 1 year 3 „ .....	467	18	12	497
„ 3 „ 6 „ .....	269	8	6	283
„ 6 „ 9 „ .....	148	3	....	151
„ 9 „ 12 „ .....	69	....	4	73
„ 12 „ 15 „ .....	46	....	2	48
„ 15 „ 20 „ .....	43	....	1	44
„ 20 „ 30 „ .....	41	2	2	45
„ 30 „ 40 „ .....	4	....	2	6
„ 40 „ 50 „ .....	1	....	....	1
„ 50 „ and upwards .....	1	....	....	1
Not ascertained .....	14	27	8	49
Total .....	1,802	88	64	1,954

The tables of the attendance of the children in schools, and the payments made by their parents for that attendance, are very interesting; indicating, as they do, an universal use of schools for some period of life, and obviously also for successive years. Of the quality of the schooling we have other and less flattering means of judging, by analogy.

*Attendance of the Children at Schools.*

Attendance at	Males.	Females.	Total.
Infant and Dame Schools	211	224	435
Day Schools .....	455	376	831
Total Day Schools.....	666	600	1,266
Sunday Schools .....	281	290	571
Total School attendance....	947	890	1,837

Thus, upon the total population of 7,711, the attendance in day-schools is nearly 1 in 9; in infant and dame schools about 1 in 18; and in both combined 1 in 6, or approaching one-half of the number not exceeding 16 years of age. The number of young persons attending Sunday Schools is seen to be 571, or 1 in  $13\frac{1}{2}$  of the whole population, and 1 in 6 of the population not exceeding 16 years of age. Thus, the school attendance is respectable, even as shown by that in day-schools only, and when the "out-of-the-way schools" for the "little ones" are included, it is seen to wear an aspect which is unrivalled even by the most glowing statistics of voluntary education, in which they universally form so great a portion; probably, as here, about one-third. The Sunday School attendance is, without doubt, proportionably less here than in the manufacturing districts, because the absence of an extensive demand for juvenile labour relieves the pressure for secular instruction on the Sunday, which causes no small part of the excess in those districts.

The table of school payments affords a very interesting view of the payments which the several classes of families are willing to make for the schooling of their children, while, of all the families returned, the children of only 113 were receiving absolutely gratuitous education.

*Total Payments made for the Schooling by the Children of each Family.*

Weekly Payments.	Families.
1d. to 3d. ....	250
3d. to 6d. ....	449
6d. to 9d. ....	186
9d. to 1s. ....	127
1s. to 1s. 3d....	32
1s. 3d. to 1s. 6d....	37
1s. 6d. to 2s....	13
2s. to 3s. 6d....	15
	1,109
Not paying anything though having children at school	113
Payments not ascertained though children at school....	44
	1,266
No children at school, and therefore making no school payments, besides the single men and women.....	536
	1,802

The total sum spent upon day schooling is thus 291s. = 14l. 11s. per week, or 1,056l. 12s. per annum, at a general average of  $5\frac{3}{4}$ d. per week, contributed by each family which pays for schooling at all, an amount which, if distributed over all the families, would be under 2d. per week each.

TABLE XVI.—School Attendance and Payments.

Trades.	Number of Families.	Average Earnings of each Family.	Children attending School.								Total Payments by each Family for Children attending Schools, where any.												Total Payments for Children.	Average Payments.
			Infant, Dame, and Day.				Total Infant, Dame, and Day.		Total Sunday Scholars.		1d. to 3d.	3d. to 6d.	6d. to 9d.	9d. to 1s.	1s. to 1s. 7d.	1s. 7d. to 1s. 6d.	1s. 6d. to 2s.	2s. to 3s. 6d.	3s. 6d. to 4s. 6d.	Gratis.	Not ascertained.			
			Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.														
		s. d.																				s. d.	s. d.	
27 Labourers .....	363	19 1	36	42	78	73	114	115	50	50	62	84	26	20	3	4	...	...	25	5	(116)	46 8 0	2 7	
25 Gunsmiths .....	87	45 3	32	21	26	18	58	39	20	25	8	24	15	24	6	16	...	...	3	1	(46)	30 9 0	8	
14 Gunmakers .....	26	26 10	...	...	7	9	7	9	4	3	1	9	5	...	...	...	...	...	1	...	(8)	3 10 0	5 3	
26 Shoemakers.....	101	20 8	10	8	16	12	26	20	11	7	8	25	5	2	...	...	...	...	2	4	(25)	10 5 0	5	
17 Bricklayers .....	31	24 10	2	2	10	9	12	11	3	9	5	5	6	2	...	4	...	...	1	...	(11)	6 9 0	7 4	
21 Coopers .....	64	27 11	6	6	13	13	19	19	5	5	10	14	4	3	5	...	...	...	1	1	(22)	9 5 0	5	
10 Engineers .....	26	32 5	3	2	7	6	10	8	2	3	...	8	2	5	...	...	...	...	3	...	(7)	4 3 0	7 4	
6 Umbrella-makers .....	11	29 1	1	5	6	1	7	6	...	...	...	4	2	2	...	3	...	...	2	...	(5)	4 0 0	9 4	
18 Porters .....	34	20 8	5	3	19	8	24	11	10	3	7	9	6	...	...	...	...	...	11	2	(14)	5 1 0	4 4	
20 Carmen.....	56	23 7	9	11	11	15	20	26	10	13	10	16	14	...	...	...	...	...	6	...	(19)	8 9 0	5 4	
7 Butchers .....	13	22 8	1	4	6	3	7	7	1	5	1	5	5	2	...	...	...	...	1	...	(6)	2 9 0	5 4	
12 Sugar-bakers.....	24	23 7	4	2	10	10	14	12	6	1	...	17	...	2	...	...	...	...	4	3	(8)	4 2 0	6 4	
13 Bakers .....	26	19 11	3	3	9	10	12	13	4	10	...	7	15	...	...	...	...	...	3	...	(7)	3 11 0	6 3	
15 Painters .....	28	23 3	3	4	5	8	8	12	4	5	4	12	2	...	...	...	...	...	2	...	(11)	3 10 0	4 4	
9 Watermen.....	20	26 5	2	...	7	4	9	4	3	3	2	3	2	...	...	...	...	...	6	...	(5)	1 9 0	4 4	
19 Smiths .....	34	27 2	1	9	3	6	4	15	5	7	4	11	...	4	...	...	...	...	...	...	(12)	5 1 0	6	
22 Sailors .....	67	15 4	7	8	12	12	19	20	13	3	12	20	6	...	...	...	...	...	1	...	(22)	8 11 0	4 4	
23 Tailors .....	72	24 6	9	9	25	17	34	26	16	15	14	25	7	2	2	...	...	...	6	4	(24)	9 10 0	5	
16 Cigar-makers .....	29	33 11	6	6	6	5	12	11	7	7	5	9	6	...	...	...	...	...	2	1	(11)	4 8 0	5	
24 Carpenters.....	76	27 0	12	7	20	16	32	23	17	13	9	25	3	7	2	3	...	...	2	3	(30)	15 4 0	6	
1 Gun-stock-maker .....	7	38 5	4	4	...	...	4	4	3	4	...	2	4	2	...	...	...	...	...	...	(3)	2 10 8 4		
4 Tin-workers .....	10	29 9	1	1	5	8	6	9	3	4	...	5	...	...	...	4	4	...	2	...	(5)	6 0 1	2 1	
2 Wheelwrights.....	8	28 2	1	2	1	...	2	2	...	...	...	4	...	...	...	...	...	...	...	...	(2)	1 0 0	6	
5 Shopmen.....	11	28 11	...	1	3	1	3	2	1	1	1	2	...	2	...	...	...	...	...	...	(3)	1 9 0	7	
11 Policemen .....	21	21 10	1	1	4	8	5	9	1	3	...	5	4	...	4	...	...	...	1	...	(6)	4 0 0	8	
3 Printers .....	9	26 6	2	2	7	3	9	5	5	3	...	2	2	2	4	...	...	...	4	...	(5)	3 10 0	9 4	
8 Clerks .....	13	30 5	3	1	5	3	8	4	1	1	...	5	2	3	...	2	...	...	...	...	(7)	5 6 0	8 1	
2 Miscellaneous.....	396	23 9	37	45	110	78	147	123	60	59	62	70	35	43	5	8	5	11	...	18	13	(124)	65 11 0	6 4
Total Families .....	1651	24 5	201	209	431	356	632	565	265	262	225	427	178	127	32	36	13	15	...	105	39	(564)	200 0 0	6
Widows with incumbrance	151	9 11	10	15	24	20	34	35	16	28	25	22	8	...	1	...	...	...	8	5	(35)	11 3 0	4	
Total Families exclusive of Single Men and Single Women Lodgers .....	1802	23 1	211	224	455	376	666	600	281	290	250	449	186	127	32	37	13	15	...	113	44	(399)	291 0 0	5 4

The following table will show the ages of the parents at the birth of their first child; and if it be assumed, that the birth of the first child, on the average, happened about one year after marriage, it will be seen that in both sexes the greatest number of marriages took place, between the ages of 21 and 25. However, it will be found that the marriages in the male sex have taken place generally at a much later period in life than among the female sex, for while out of 1,488 marriages 170 only of the males were under 20 years of age, as many as 461 females were under the same age. On the other hand, while 236 only of the females were between the ages of 26-30, there were as many as 391 males at those ages. Again, while there were only 68 females married above the ages of 30, it will be found that as many as 223 males were married above that age.

Age of Fathers.	Age of Mothers.							Total.
	14-15.	16-20.	21-25.	26-30.	31-35.	36-40.	41-45.	
14-15.....	....	....	....	....	....	....	....	....
16-20.....	8	115	38	8	1	....	....	170
21-25.....	5	218	418	57	6	....	....	704
26-30.....	....	87	184	108	9	3	....	391
31-35.....	2	18	55	40	19	2	....	136
36-40.....	....	8	15	21	8	3	1	56
41-45.....	....	....	5	1	6	3	2	17
46-50.....	....	....	6	2	1	2	....	11
51-55.....	....	....	....	1	1	....	....	2
56.....	....	....	....	....	....	....	1	1
Total....	15	446	721	238	51	13	4	1,488

Tables A, B, C, D, and E, exhibit facts of considerable interest and importance. They are arranged to show the influence of the age at marriage on the number of children born, and the mortality of those children. Table A represents the results of those marriages, in which the birth of the first child took place when the mother was between the ages 16-20. The first column represents the number of years which have elapsed since the birth of the first child. The

Second—The number of families over which the observations extend; the

Third—The number of children born; the

Fourth—The number of children then alive; the

Fifth—The number dead; the

Sixth—The rate of mortality per cent., and the

Seventh—The average number of children born to each family within the given periods of years set forth in the first column, as having elapsed since the birth of the first child.

Tables B, C, and D represent the same class of facts for families in which the birth of the first child took place between the quinquennial ages 21-25, 26-30, and 31-35; and Table E includes the results for all the marriages formed at whatever period of life they may have taken place.

Tables *a*, *b*, *c*, *d*, and *e* are abridgments of the preceding tables. The first point deserving of attention in those figures, is the circum-

stance that those marriages formed at an earlier period of life, are more prolific than those formed at a later period. The gross results for each group of facts is as follows:—

The average number of children to each family, in which the birth of the first child took place between the ages of .....	16—20	} was 6·07 to each family.
	21—25	
	26—30	
	31—35	
		„ 5·15 „
		„ 4·87 „
		„ 3·94 „

To the results presented in this form, however, it may be objected, that the number of years elapsed between the birth of the first child over the time to which the facts are collected, is, on the average, greater in the case of the earlier marriages than in the later, and hence the greater number of children. This objection, true in principle, will be found, under a closer analysis of the figures, to materially alter the relative bearing of the results. The following abstract will show the average number of children to each marriage, at the respective periods of 10, 20, 30, and 40 years after the birth of the first child, for each class of marriages formed at the four different quinquennial periods of life.

Years elapsed since Birth of First Child.	Average Number of Children to each Marriage, formed at Ages			
	16—20.	21—25.	26—30.	31—35.
10	5·05	4·51	4·42	3·44
20	7·68	7·01	6·43	3·00
30	8·41	7·89	6·80	7·00
40	10·85	8·24	5·00	4·00

It is thus obvious, that marriages formed under the age of 25, are more prolific than those formed after that age, and that those formed between 16 and 20 years of age are still more so than those at any of the superior ages.

In connexion with these results, it is important to view the rate of mortality of the children born in marriages contracted at the same period of life.

The gross mortality up to all ages of the whole children born in families in which the first child was born, between the ages of .....	16—20	} was 46·11 per cent.
	21—25	
	26—30	
	31—35	
		„ 41·07 „
		„ 39·61 „
		„ 37·56 „

These figures are of course subject to the objection just alluded to, but the following abstract will show the results in a corrected form.

Years elapsed since Birth of First Child.	Mortality per cent. of the Children born to Marriages formed at Ages			
	16—20.	21—25.	25—30.	31—35.
10	36·87	37·09	37·89	35·48
20	47·44	43·10	44·36	16·67
30	53·03	43·89	48·53	64·29
40	63·12	57·14	68·00	50·00

From this abstract it is obvious, that of the three first periods, the children born of marriages formed in the quinquennial term of life, 21-25, are subject to a less rate of mortality than those of the period immediately preceding or immediately following, the rate of mortality in the most advanced period, 31-35, is very irregular, and no doubt arises from the small number of families included in that group. The two preceding series of facts furnish materials for the solution of a very interesting and highly important question, namely, what is the effect of the marriages formed at those different terms of life on the ultimate increase of population? By the first of the two preceding abstracts it was found, that the earlier the period of life at which marriage was contracted, the greater the number of children born; but by the second abstract a difference is observable in the rate of mortality of the various periods, and this must disturb the results in the first class of facts.

Let  $a$  represent the results given in the first abstract;  $b$  represent those given in the second; then  $a - \frac{a \times b}{100}$  = the actual increase resulting from each marriage to the population. The following is an abstract of the results thus arrived at:

Years elapsed since Birth of First Child.	Children alive by each Marriage contracted at the following Ages.			
	16—20.	21—25.	26—30.	31—35.
10	3.19	2.84	2.75	2.22
20	4.04	4.09	3.58	2.50
30	3.95	4.43	3.50	2.50
40	4.00	3.53	1.60	2.00

It hence follows, that marriages formed under 25 years of age increase the population more than those formed above that age; and on a close examination it will be found, that there is very little difference in this respect between marriages contracted at ages 16-20 and 21-25, the rate of increase, however, being somewhat higher in the former period. With regard to the last two quinquennial terms at which marriage is formed, it will be seen that the rate of increase is not so great for ages 26-30 as in that immediately preceding, and in the period 31-35 the rate of increase is still less; in fact, the earlier the period of marriage the greater the increase resulting to the population, the difference between the first and second periods being very little, between the second and third very considerable, about 23 per cent., and between the third and fourth about 20 per cent.

In the consideration of these facts and observations, although they relate to 1,506 families, from which have resulted 8,034 births, and of which 4,616 children, or 57.46 per cent., are still alive, it must be borne in mind that they include only one class of the community, and may be subject to disturbing influences, such as to destroy their character as a type of the general population; however, there is reason to suppose that these results may be a more faithful representative of the condition of the whole population, than if they were derived from a

like number of facts from either the middling or higher classes of Society. On reflection it will also be found, that the unfruitful marriages are not included in any of those 1,506 families, all included being more or less productive. Likewise, the marriages are all those in which one or both the parents are still alive, and consequently the results of fruitful marriages, in which the parents have died before the lapse of the given period of years brought under review, are excluded. An influence, independent of the relative number of marriages at each age, will further affect the results arising from the varying rates of mortality at the different terms of life, even when equal numbers only at those periods are considered; and it will follow, that fewer marriages of limited fruitfulness will be excluded from the groups at the younger ages, the effect of which must be to show in the preceding figures a reduced ratio of children at each marriage formed at those periods of life, compared with that which would appear were all cases included. The relative bearing of all the results are therefore so far modified. Also, the children still alive, composing 57·46 per cent. of all born, may, subsequent to the period now under observation, and when classified according to the ages at marriage of their parents, show a very different rate of mortality from that indicated in the respective classes by those who have hitherto died, and still more extended observations would be required to show, whether any and what difference exist, in the fruitfulness of the marriages in the succeeding generation. Lastly, all these remarks have had reference to the age of the mother only at birth of her first child.

The next point to which attention is directed, is the rate of mortality experienced by the children of those families. This will be seen by an inspection of Tables A, B, C, D, and E, as well as the abridgments of those tables, but as these, from their peculiar construction, as well as from the small number of families in some of the years, cause various irregularities in the results, the following graduated abstract will exhibit the rate of mortality for all the groups included in the preceding tables. The mortality in the first year of life appears to be remarkably low, being only 11·86 per cent., while, according to the Fourth Report of the Registrar-General. The mortality during the first year of life was for—

England and Wales .....	17·355 per cent.
For the County of Surrey .....	13·278    ,,
For the Metropolis .....	20·124    ,,
For Liverpool .....	28·157    ,,

It will further be seen, from the following abstract, column 6, that of 100 children born, 62·76 live to complete their tenth year:

No. of Years since Birth of 1st Child.	No. of Children Born. (Corrected.)	No. of Children Alive. (Corrected.)	No. of Children Dead.	Decrements from Birth to each Age.	Living.
1	59	52	7	11.86	88.14
2	88	69	19	21.59	78.41
3	99	76	23	28.23	71.77
4	150	107	43	28.66	71.34
5	187	132	55	29.41	70.59
6	210	148	62	29.52	70.48
7	210	147	63	30.00	70.00
8	236	159	77	32.63	67.37
9	233	151	82	35.19	64.81
10	239	150	89	37.24	62.76
11	264	161	103	....	....
12	282	169	113	....	....
15	1,324	813	511	38.60	61.41
20	1,386	779	607	43.80	56.21
25	1,027	561	466	45.37	54.63
30	893	465	428	47.93	52.07
35	453	204	249	54.97	45.03
40	361	138	223	61.77	38.23
45	163	70	93	57.06	42.95
50	68	22	46	67.65	32.35
55	28	8	20	71.43	28.57
60	27	8	19	70.37	29.63

but according to the same report of the Registrar-General, the number out of 100 born who live to complete their tenth year is,—

For England and Wales .....	70.61
For the County of Surrey .....	75.42
For the Metropolis .....	64.92
For Liverpool .....	48.21

while, according to the following well-known life-tables, the number out of 100 born who live to complete their tenth year is by the—

Carlisle Table (Milne) .....	64.60
Sweden (Nicander) .....	63.03
Select Lives in France (Deparcieux) .....	60.01
Towns in France (Duvillard) .....	55.11
Northampton (Price) .....	48.71
Montpellier (Monyue) .....	43.58

Again, the numbers living to complete their 20th and their 30th years, according to each of the above authorities, is as follows:—

Description of Table.	Out of 100 Born there live to complete their	
	20th Year.	30th Year.
According to result in this Paper .....	56.21	52.07
England and Wales .....	66.06	60.33
County of Surrey .....	70.89	65.56
Metropolis .....	61.68	56.67
Liverpool .....	44.81	40.35
Carlisle .....	60.90	56.42
Sweden .....	59.03	53.91
Select Lives in France .....	55.58	50.05
Towns in France .....	50.22	43.82
Northampton .....	41.05	37.64
Montpellier .....	40.97	36.62

Beyond the age of 30, the facts in this paper are not sufficiently numerous to warrant a comparison being instituted between them and other life tables, but from the illustrations already brought forward, it will be seen that the rate of mortality in the first year of life, is less than in any other of those cases. Again, with respect to the decrement of life between birth and the tenth year, it is greater than that for England and Wales, the county of Surrey, the Metropolis, the Carlisle Table, and that for the kingdom of Sweden, but less than the decrement for the select lives in France, the towns in France, Northampton, Liverpool, and Montpellier.

With respect to the decrements of life up to the ages of 20 and 30, they will be found to hold the same relative situation as that for age 10, being intermediate between Sweden and the select lives of France.

These remarks being applicable to all the changes and fluctuations, taking place from birth up to the various ages at which the comparisons are instituted, any irregularity in the mortality of one period, the first year of life for example, will disturb the results for all the subsequent ages. In order, therefore, to avoid the effects of the force of this element, it may be important to test the relative value of the different classes of facts, by a comparison of the equation of life for the different mortality tables. The following gives the result thus arrived at, for one-fourth of the integral or original number.

Age of Comparison, or that from which the equation is derived.	Results of this Paper.	England and Wales.	County of Surrey.	Metropolis.	Liverpool.	Carlisle.	Sweden.	Select Lives in France.	Towns in France.	Northampton.	Montpellier.
10	24.00	31.25	34.00	31.00	27.00	33.34	32.90	29.60	24.54	22.72	28.36
20	20.60	26.04	29.00	26.00	21.00	27.16	25.40	26.31	19.32	17.14	22.35
30	17.00	18.49	26.00	19.00	16.00	22.67	21.72	23.33	14.84	14.46	18.08

In viewing the decrements of life from birth only, it was found that the results of this paper were intermediate in the scale between the table for Sweden and that for the select lives in France, that comparison was of course affected by the rate of mortality in infant life; but in the above tables, where the results of advanced life only enter into the figures, it is seen that the mortality is higher than that of all the tables, except those for the towns of France and for Northampton.

It is hence obvious, that so far as the facts here brought forward can be relied on, the mortality of infant life is very low, and that of advanced life high.

Lest the results of this inquiry, however, should be deemed by some to fairly indicate the influence of locality on the duration of life, of the inhabitants of this district of Whitechapel, with equal truth for the early and advanced terms of life, it may be well to draw attention to the following abstract, showing the length of time which the principal members of families have resided in their dwellings.

	Families.	Single Men.	Single Women.	Total.
From 1 week to 4 weeks .....	60	3	2	65
" 1 month to 6 months .....	369	10	12	391
" 6 months to 1 year .....	270	17	13	300
" 1 year to 3 years .....	467	18	12	497
" 3    "   6    " .....	269	8	6	283
" 6    "   9    " .....	148	3	....	151
" 9    " 12    " .....	69	....	4	73
" 12   " 15    " .....	46	....	2	48
" 15   " 20    " .....	43	....	1	44
" 20   " 30    " .....	41	2	2	45
" 30   " 40    " .....	4	....	2	6
" 40   " 50    " .....	1	....	....	1
" 50 and upwards .....	1	....	....	1
Not ascertained .....	14	27	8	49
	1,802	88	64	1,954

It will thus be seen, that nearly two-thirds of the families have been less than three years in their present residence, and more than one-fourth between one and three years only. The term in "their present residence" will admit of the explanation that they may have been much longer in the same neighbourhood. Still many amongst those who have changed their dwellings must also have been recent inhabitants of the locality, and it must, therefore, follow, that the younger lives indicate more strictly the sanitary condition of the place than those of more advanced age. The high rate of mortality of the older lives now under review can, consequently, not be attributable to residence in Whitechapel, as the majority of the deaths in advanced life may have taken place elsewhere—one-thirteenth only of the families having occupied their present residences upwards of twelve years; but with respect to the deaths at the younger ages, the greater number of those must have happened in the locality, and hence the comparative healthiness of the district.

In regard to the state of health of the families surveyed in the district now under consideration, it may be interesting to subjoin the following abstract returned "well" and "ill."

*Population and State of Health of the Families of the Working Classes in St. Mary's District of St. George's in the East.*

Number of Families visited, 1,802.

	Well.	Ill.	Whole Population.	No of Families.
Male Children under 15 .....	1,636	49	=3,345	1,802
Female Ditto .....	1,632	28		
	3,268	77		
Adult Males .....	1,886	42	=4,021	....
Adult Females .....	2,005	88		
Carried forward .....	3,891	130		

*Population and State of Health of the Families of the Working Classes in St. Mary's District of St. George's in the East.—Continued.*

Number of Families visited, 1,302.				
	Well.	Ill.	Whole Population.	No. of Families.
Brought forward .....			7,366	1,802
Aged and Infirm Males .....	38	15		
Aged and Infirm Females.....	60	18		
	98	33	= 131	....
Population not classified .....	....	....	11	....
Total .....	7,257	240	=7,508	....
Single Men as Families .....	....	....	....	88
Single Women as Families .....	....	....	....	64
Adult Males .....	122	....	122	....
Adult Females .....	67	3	70	....
Aged and Infirm Males .....	3	....	3	....
Aged and Infirm Females.....	4	4	8	....
Grand Total .....	7,453	247	7,711	
Grand Total of Families....	....	....	....	1,954

It is thus seen, that of the 7,711 persons here enumerated, 247, or 3·923 per cent. are returned as being “ill.” These numbers include the children and those under 15 years of age. There is no authentic record of the proportion constantly sick in this country at all ages, including the young, but the records of Friendly Societies will admit of a comparison for every term of life from the age of 10 upwards; and this comparison will, to some extent, be strictly applicable, from the fact that of the 1,954 families now referred to, 677, or 34·135, were connected with Friendly Societies. The following will show the proportion recorded ill in those families at various terms of life, as well as the ratio constantly sick for the average of England and Wales, among the members of Friendly Societies.

		According to the results of this Paper.	Average of England & Wales.
Proportion Sick or Ill	{ In the Adult Population, aged 15 years and upwards, but not including the aged and infirm above the age of 70..... }	3·257 per cent.	3·319 per cent.
Ditto.....	{ In the aged and infirm, above the age of 70 .....	25·191 per cent.	46·775 per cent.
Ditto.....	{ At all terms of life from the age of 15 and upwards .....	3·923 per cent.	4·613 per cent.

So far as the preceding facts are available as a test of health, it is obvious that the district now under consideration, must be regarded in a very favourable light.

TABLE XVII.—Ages of each Parent when first Child born, Present

	Trades.	Number of Families.	Average Earnings of Families.	Age of Father Classified when first child Born.							Total Ages of Father.	Average Age of Father and Mother when first child Born.	
				Under 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 and upwards.	Ages not ascertained.		Fathers' Age.	Mothers' Age.
27	Labourers.....	363	s. d. 19 1	14	118	95	44	17	10	65	7,787	26	23
25	Gunsmiths .....	57	45 3	5	49	16	3	2	1	11	1,822	24	21
14	Gunmakers .....	26	26 10	3	16	2	...	...	...	5	462	22	20
26	Shoemakers .....	101	20 8	7	38	20	10	4	1	21	2,033	25	23
17	Bricklayers .....	31	24 10	2	15	5	3	1	...	5	625	24	21
21	Coopers.....	64	27 11	5	18	20	6	4	2	9	1,472	27	22
10	Engineers.....	20	32 5	1	6	5	2	...	...	6	358	26	23
6	Umbrella-makers.....	11	29 1	1	5	3	...	...	1	1	252	25	23
18	Porters .....	34	20 8	1	16	10	5	...	...	2	795	25	22
20	Carmen .....	50	23 7	4	17	13	3	2	...	11	961	25	23
7	Butchers .....	13	22 8	1	4	3	2	...	...	3	248	25	22
12	Sugar-bakers .....	24	23 7	2	2	10	5	3	...	2	612	25	22
13	Bakers .....	26	19 11	2	9	7	...	...	1	7	466	25	22
15	Painters .....	28	23 3	2	8	8	2	2	1	5	602	26	22
9	Watermen .....	20	26 5	2	5	5	1	...	...	4	369	23	19
19	Smiths .....	34	27 2	1	15	9	1	1	...	7	660	25	21
22	Sailors .....	67	15 4	4	19	17	7	4	3	13	1,456	27	23
23	Tailors .....	72	24 6	4	24	18	11	2	3	10	1,658	26	23
16	Cigar-makers .....	29	33 11	1	17	5	1	1	...	4	611	24	22
24	Carpenters .....	76	27 0	4	29	23	9	2	2	7	1,772	26	23
1	Gun-stock-maker .....	7	38 5	1	2	2	...	...	...	2	112	22	22
4	Tin-workers.....	10	29 9	...	5	3	1	...	1	...	275	27	23
2	Wheelwrights .....	8	28 2	...	2	1	2	1	...	2	164	27	25
5	Shopmen .....	11	28 11	2	3	1	2	...	...	3	196	24	22
11	Policemen.....	21	21 10	...	9	9	2	...	...	1	506	25	23
3	Printers.....	9	26 0	...	5	4	...	...	...	...	217	24	23
8	Clerks .....	13	30 5	1	4	6	2	...	...	...	333	26	24
28	Miscellaneous .....	396	23 9	13	136	110	32	15	15	75	8,372	26	23
Total Families .....		1,651	24 5	83	599	430	156	61	41	281	35,176	26	23
Widows with incumbance .....		151	9 11	5	43	45	15	7	2	34	3,061	26	23
Total Families, exclusive of Single Men and Single Women Lodgers .....		1,502	23 1	88	642	475	171	68	43	315	32,237	26	23

## Ages of Parents, Number of Children they have had, &amp;c.

Total Ages of Mother.	Age of Mother Classified when first child Born.							Total of Mothers' present Age.	Total Children they have had.	Total Number they have now living.	Average of Mothers' Present Age, of Children they have had, and now Living.		
	Age not as- certained.	Under 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 and up- wards.				Average Mothers' present age.	Average of children she has had.	Average of children now living.
6,926	63	64	148	63	16	5	4	(299) 11,730	(301) 1,642	(301) 904	39	5.4	3.0
1,635	11	14	54	5	3	...	...	(75) 2,452	(76) 379	236	33	4.9	3.1
427	5	8	12	1	...	...	...	(21) 630	(21) 93	55	30	4.4	2.6
1,803	21	13	52	10	4	1	...	(79) 2,895	(81) 408	238	37	5.1	2.9
564	4	8	16	3	...	...	...	(26) 984	(27) 165	91	38	6.1	3.3
1,226	9	11	33	8	2	1	...	(56) 2,110	(56) 295	153	38	5.3	2.7
322	6	2	9	3	...	...	...	(14) 442	(14) 55	39	32	3.9	2.8
235	1	3	4	1	1	1	...	(10) 401	(10) 68	34	40	6.8	3.4
709	2	8	17	5	2	...	...	(31) 1,120	(32) 185	108	36	5.8	3.4
912	10	5	26	7	2	...	...	(40) 1,460	(40) 209	121	36	5.2	3.0
218	3	2	6	1	1	...	...	(10) 359	(10) 52	35	36	5.2	3.5
488	2	6	9	6	1	...	...	(22) 778	(22) 110	71	35	5.0	3.2
425	7	4	11	3	...	1	...	(19) 667	(19) 99	58	35	5.2	3.0
519	5	7	10	4	2	...	...	(23) 843	(23) 135	75	37	5.9	3.3
312	4	9	6	1	...	...	...	(16) 593	(16) 92	46	37	5.7	2.9
568	7	6	19	2	...	...	...	(27) 930	(27) 141	77	34	5.2	2.8
1,283	11	11	25	16	2	2	...	(56) 2,028	(56) 249	126	36	4.4	2.2
1,408	10	17	26	14	4	1	...	(61) 2,396	(62) 368	230	39	5.9	3.7
555	4	6	14	3	2	...	...	(25) 874	(25) 109	65	35	4.4	2.6
1,575	7	16	33	15	3	2	...	(69) 2,786	(69) 425	243	40	6.1	3.5
133	1	2	2	2	...	...	...	(6) 214	(6) 36	24	36	6.0	4.0
227	...	3	4	2	1	...	...	(10) 410	(10) 75	47	41	7.5	4.7
173	1	1	4	1	...	1	...	(7) 254	(7) 33	20	36	4.7	2.9
197	2	1	7	1	...	...	...	(9) 299	(9) 40	19	33	4.4	2.1
455	1	2	13	5	...	...	...	(20) 707	(20) 91	50	35	4.5	2.5
206	...	2	4	3	...	...	...	(9) 308	(9) 46	26	34	5.1	2.9
311	...	1	6	5	1	...	...	(13) 548	(13) 72	48	42	5.5	3.7
7,473	73	57	168	76	17	4	1	(315) 12,429	(326) 1,693	1,026	39	5.2	3.1
31,285	270	289	738	266	64	19	5	(1,368) 51,650	(1,387) 7,365	(1,387) 4,265	37.76	5.31	3.07
3,253	9	24	74	35	8	1	...	(145) 6,647	(145) 841	453	45.84	5.80	3.20
34,538	279	313	812	301	72	20	5	(1,513) 58,297	(1,532) 8,206	(1,532) 4,718	38.53	5.36	3.08

TABLE XVIII.—*Total of Present Age of Married Women having no Children, classified according to Trades.*

Trades.	Under 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 and upwards.
Labourers .....	....	282	130	188	222	86	93	131
Gunsmiths .....	19	62	77	....	....	....	....	....
Gunmakers .....	....	....	25	....	....	....	....	....
Shoemakers .....	19	22	27	94	....	....	112	....
Bricklayers .....	....	....	28	....	....	....	....	....
Coopers .....	....	45	54	....	....	....	88	50
Engineers .....	19	48	....	30	....	....	47	....
Umbrella-makers .....	....	....	....	....	....	....	....	....
Porters .....	....	....	....	....	....	....	....	....
Carmen .....	....	21	110	30	35	....	48	....
Butchers .....	19	....	....	30	....	....	....	....
Sugar-bakers .....	....	22	25	....	....	....	....	....
Bakers .....	....	....	26	98	....	40	47	....
Painters .....	....	....	22	31	....	....	45	....
Watermen .....	....	....	....	....	....	41	45	....
Smiths .....	....	89	....	62	....	43	....	....
Sailors .....	....	111	105	....	....	40	....	....
Tailors .....	....	23	130	....	....	40	....	....
Cigar-makers .....	....	20	....	....	....	....	....	....
Carpenters .....	....	23	28	....	....	40	....	....
Gun-stock-makers .....	....	....	....	....	....	43	....	....
Tin-workers .....	....	....	....	....	....	....	....	....
Wheelwrights .....	....	....	....	....	36	....	....	....
Shopmen .....	....	23	26	....	....	....	....	....
Widows with incumbrance .....	....	....	....	....	....	....	48	....
Policemen .....	....	....	....	....	....	....	....	....
Printers .....	....	....	....	....	....	....	....	....
Clerks .....	....	....	....	....	....	....	....	....
Miscellaneous .....	....	225	343	94	37	81	48	278
Carried to Totals of present Age of Mothers having Children .....	76	1,016	1,156	657	330	454	651	459

TABLE XIX.—*Number of Children Born and Living in Families, classified by the Mother's Age at the Birth of the First Child.*

A.—Age of Mother at Birth of first Child.—16 to 20.						
No. of Years since Birth of 1st Child.	No. of Families.	No. of Children Born.	Average No. of Children to each Family.	No. of Children Alive.	No. of Children Dead.	Mortality per Cent.
1	13	13	1.00	13	....	....
2	11	16	1.45	13	3	18.75
3	9	15	1.66	13	2	13.33
4	21	56	2.66	35	21	37.50
5	14	43	3.07	30	13	30.23
6	16	60	3.75	40	20	33.33
7	23	78	3.39	55	23	29.49
10	86	434	5.05	274	160	36.87
15	80	520	6.50	301	219	42.12
20	56	430	7.68	226	204	47.44
25	44	353	8.48	178	175	49.57
30	39	328	8.41	154	174	53.03
35	15	118	7.87	45	73	61.86
40	13	141	10.85	52	89	63.12
45	4	33	8.25	23	10	30.30
50	5	64	12.80	16	48	75.00
55	2	18	9.00	5	13	72.22
60	2	28	14.90	8	20	71.43
Total ....	453	2,748	6.07	1,481	1,267	46.11

B.—Age of Mother at Birth of first Child.—21 to 25.						
No. of Years since Birth of 1st Child.	No. of Families.	No. of Children Born.	Average No. of Children to each Family.	No. of Children Alive.	No. of Children Dead.	Mortality per Cent.
1	36	39	1.08	33	6	15.38
2	39	56	1.44	43	13	23.21
3	31	58	1.87	43	15	25.86
4	33	88	2.67	61	27	30.68
5	36	103	2.86	74	29	28.15
6	31	97	3.13	69	28	28.86
7	40	131	3.27	95	36	27.48
10	116	523	4.51	329	194	37.09
15	98	604	6.16	390	214	34.97
20	92	645	7.01	367	278	43.10
25	66	482	7.30	280	202	41.91
30	56	442	7.89	248	194	43.89
35	28	223	7.96	80	143	64.13
40	17	140	8.24	60	80	57.14
45	10	121	12.10	52	69	57.02
50	2	10	5.00	3	7	70.00
55	....	....	....	....	....	....
60	....	....	....	....	....	....
Total ....	731	3,762	5.15	2,217	1,545	41.07

TABLE XIX.—Continued.

## C.—Age of Mother at Birth of first Child.—26 to 30.

No. of Years since Birth of 1st Child.	No. of Families.	No. of Children Born.	Average No. of Children to each Family.	No. of Children Alive.	No. of Children Dead.	Mortality per Cent.
1	6	6	1.00	6	....	....
2	9	15	1.66	12	3	20.00
3	12	22	1.83	17	5	22.73
4	10	36	3.60	20	16	44.44
5	7	17	2.43	14	3	17.41
6	7	19	2.71	18	1	5.26
7	9	39	4.33	30	9	23.07
10	43	190	4.42	118	72	37.89
15	37	195	5.27	128	67	34.36
20	40	257	6.43	143	114	44.36
25	17	103	6.06	55	48	46.60
30	20	136	6.80	70	66	48.53
35	9	69	7.67	50	19	27.54
40	10	50	5.00	16	34	68.00
45	2	8	4.00	4	4	50.00
50	2	7	3.50	5	2	28.57
55	....	....	....	....	....	....
60	....	....	....	....	....	....
Total ....	240	1,169	4.87	706	463	39.61

## D.—Age of Mother at Birth of first Child.—31 to 35.

No. of Years since Birth of 1st Child.	No. of Families.	No. of Children Born.	Average No. of Children to each Family.	No. of Children Alive.	No. of Children Dead.	Mortality per Cent.
1	1	1	1.00	....	1	100.00
2	1	1	1.00	1	....	....
3	2	4	2.00	3	1	25.00
4	2	4	2.00	3	1	25.00
5	0	0	....	0	0	....
6	6	20	3.33	16	4	20.00
7	4	21	5.25	11	10	47.62
10	9	31	3.44	20	11	35.48
15	1	4	4.00	2	2	50.00
20	8	24	3.00	20	4	16.67
25	8	49	6.13	26	23	46.94
30	2	14	7.00	5	9	64.29
35	4	16	4.00	11	5	31.25
40	1	4	4.00	2	2	50.00
45	1	4	4.00	3	1	25.00
50	....	....	....	....	....	....
55	....	....	....	....	....	....
60	....	....	....	....	....	....
Total ....	50	197	3.94	123	74	37.56

TABLE XIX.—*Continued.*

E.—Age of Mother at Birth of first Child.—Total Ages 14 to 43.

No. of Years since Birth of 1st Child.	No. of Families.	No. of Children Born.	Average No. of Children to each Family.	No. of Children Alive.	No. of Children Dead.	Mortality per Cent.
1	56	59	1.05	52	7	11.86
2	60	88	1.46	69	19	21.59
3	54	99	1.83	76	23	23.23
4	68	190	2.80	122	68	35.79
5	57	163	2.86	118	45	27.61
6	63	208	3.30	151	57	27.40
7	78	273	3.50	195	78	28.57
10	259	1,197	4.62	752	445	37.18
15	223	1,361	6.10	841	520	38.21
20	203	1,395	6.87	779	616	44.16
25	137	1,001	7.31	545	456	45.55
30	118	927	7.86	481	446	48.11
35	59	445	7.54	196	249	55.96
40	41	335	8.17	130	205	61.19
45	17	166	9.76	72	94	56.63
50	9	81	9.00	24	57	70.37
55	2	18	9.00	5	13	72.02
60	2	28	14.00	8	20	71.43
Total ....	1,506	8,034	5.33	4,616	3,418	42.54

A.—Age of Mother at Birth of 1st Child. 16 to 20.							B.—Age of Mother at Birth of 1st Child. 21 to 25.						
No. of years since birth of 1st child.	No. of Families.	No. of Children born.	No. of Children alive.	No. of Children dead.	Mortality per cent.	Average No. of Children in each Family.	No. of years since birth of 1st child.	No. of Families.	No. of Children born.	No. of Children alive.	No. of Children dead.	Mortality per cent.	Average No. of Children to each Family.
1	13	13	13	..	..	1.00	1	36	39	33	6	15.38	1.08
2	11	16	13	3	18.75	1.45	2	39	56	43	13	23.21	1.44
3	9	15	13	2	13.33	1.66	3	31	58	43	15	25.86	1.87
4	21	56	35	21	37.50	2.66	4	33	88	61	27	30.68	2.67
5	14	43	30	13	30.23	3.07	5	36	103	74	29	28.15	2.86
6	16	60	40	20	33.33	3.75	6	31	97	69	28	28.86	3.13
7	23	78	55	23	29.49	3.39	7	40	131	95	36	27.48	3.27
8	13	60	44	16	26.67	4.61	8	33	121	85	36	29.75	3.66
9	18	89	52	37	41.57	4.94	9	12	44	29	15	34.09	3.66
10	28	131	81	50	38.17	4.68	10	20	95	53	42	44.21	4.75
11	9	47	27	20	42.55	5.22	11	25	124	72	52	41.94	5.00
12	18	107	70	37	34.58	5.94	12	26	139	90	49	35.25	5.34
13	23	154	82	72	46.75	6.70	13	21	114	77	37	32.46	5.13
14	13	94	49	45	47.87	7.23	14	21	126	80	46	36.51	6.00
15	13	87	63	24	27.59	6.69	15	23	152	90	62	40.79	6.61
16	19	118	73	45	38.13	6.21	16	19	128	84	44	34.37	6.74
17	12	67	31	33	49.25	5.58	17	14	84	59	25	29.76	6.00
18	8	52	24	28	53.85	6.50	18	16	95	58	37	38.95	5.94
19	10	76	42	34	44.74	7.60	19	21	166	91	75	45.18	7.91
20	18	122	67	55	45.13	6.78	20	19	120	69	51	42.50	6.32
21	7	70	37	33	47.14	10.00	21	20	146	83	63	43.15	7.30
22	13	110	56	54	19.09	8.46	22	16	118	66	52	44.07	7.37
23	12	100	42	58	58.00	8.33	23	15	116	69	47	40.52	7.73
24	10	91	49	42	46.15	9.10	24	21	159	89	70	44.02	7.57
25	7	40	28	12	30.00	5.71	25	8	57	32	25	43.86	7.12
26	5	33	14	19	57.58	6.60	26	15	103	64	39	37.86	6.86
27	10	89	45	44	49.44	8.90	27	7	47	26	21	44.68	6.71
28	4	23	12	11	47.83	5.75	28	13	97	56	41	42.27	7.46
29	12	100	42	58	58.00	8.33	29	15	118	67	51	43.22	7.86
30	13	119	52	67	56.30	9.15	30	16	141	75	66	46.81	8.81
31	3	35	20	15	42.86	11.67	31	6	40	28	12	30.00	6.67
32	7	51	28	23	45.10	7.29	32	6	46	22	24	52.17	7.67
33	2	16	6	10	62.50	8.00	33	6	36	11	25	69.44	6.00
34	2	14	8	6	42.86	7.00	34	6	64	22	42	65.62	10.66
35	3	13	4	9	69.23	4.33	35	6	39	18	21	53.84	6.50
36	7	61	25	36	59.01	8.71	36	7	56	16	40	71.43	8.00
37	1	14	2	12	85.71	14.00	37	3	28	13	15	53.57	9.33
38	1	13	6	7	53.84	13.00	38	1	5	5	..	..	5.00
39	4	57	21	36	63.16	14.25	39	4	35	13	22	62.86	8.75
40	5	48	13	35	72.92	9.60	40	2	21	5	16	76.19	10.50
41	2	13	5	8	61.54	6.50	41	5	48	16	32	66.67	9.60
42	1	10	7	3	30.00	10.00	42	5	31	21	10	32.26	6.20
43	2	23	18	5	21.74	11.50	43	3	47	16	31	65.96	15.67
44	1	5	2	3	60.00	5.00	44	3	34	12	22	64.71	11.33
45	..	..	..	..	..	..	45	3	33	9	24	72.73	11.00
46	..	..	..	..	..	..	46	1	7	5	2	28.57	7.00
47	1	5	3	2	40.00	5.00	47	..	..	..	..	..	..
48	..	..	..	..	..	..	48	1	3	..	3	100.00	3.00
49	3	33	8	25	75.76	11.00	49	..	..	..	..	..	..
50	..	..	..	..	..	..	50	1	7	3	4	57.14	7.00
51	1	11	5	9	61.28	14.00	51	..	..	..	..	..	..
52	1	17	3	14	82.35	17.00	52	..	..	..	..	..	..
53	..	..	..	..	..	..	53	..	..	..	..	..	..
54	2	18	5	13	72.22	9.00	54	..	..	..	..	..	..
55	..	..	..	..	..	..	55	..	..	..	..	..	..
56	..	..	..	..	..	..	56	..	..	..	..	..	..
57	..	..	..	..	..	..	57	..	..	..	..	..	..
58	..	..	..	..	..	..	58	..	..	..	..	..	..
59	1	15	7	8	53.33	15.00	59	..	..	..	..	..	..
60	1	13	1	12	92.31	13.00	60	..	..	..	..	..	..
153							731	3,762	2,217	1,545	41.07	5.15	

C.—Age of Mother at Birth of 1st Child. 26 to 30.							D.—Age of Mother at Birth of 1st Child. 31 to 35.						
No. of years since birth of 1st child.	No. of Families.	No. of Children born.	No. of Children alive.	No. of Children dead.	Mortality per cent.	Average No. of Children in each Family.	No. of years since birth of 1st child.	No. of Families.	No. of Children born.	No. of Children alive.	No. of Children dead.	Mortality per cent.	Average No. of Children in each Family.
1	6	6	6	..	..	1.00	1	1	1	..	1	100.00	1.00
2	9	15	12	3	20.00	1.66	2	1	1	1	..	..	1.00
3	12	22	17	5	22.73	1.83	3	2	4	3	1	25.00	2.00
4	10	36	20	16	44.44	3.60	4	2	4	3	1	25.00	2.00
5	7	17	11	3	17.41	2.43	5	..	..	..	..	..	..
6	7	19	18	1	5.26	2.71	6	6	20	16	4	20.00	3.33
7	9	39	30	9	23.07	4.33	7	4	21	11	10	47.62	5.25
8	5	14	12	2	14.28	2.80	8	4	11	7	4	36.36	2.75
9	10	52	33	19	36.54	5.20	9	1	3	2	1	33.33	3.00
10	12	54	33	21	38.89	4.50	10	3	15	10	5	33.33	5.00
11	6	18	12	6	33.33	3.00	11	1	2	1	1	50.00	2.00
12	10	52	28	24	46.15	5.20	12	..	..	..	..	..	..
13	14	64	42	22	34.37	4.71	13	..	..	..	..	..	..
14	8	48	23	25	52.08	6.00	14	..	..	..	..	..	..
15	1	9	5	4	44.44	9.00	15	..	..	..	..	..	..
16	8	37	29	8	21.62	4.62	16	1	4	2	2	50.00	4.00
17	6	37	29	8	21.62	6.17	17	..	..	..	..	..	..
18	8	34	21	13	38.23	4.25	18	..	..	..	..	..	..
19	8	41	25	16	39.02	5.12	19	3	9	9	..	..	3.00
20	11	91	44	47	51.65	8.27	20	2	5	3	2	40.00	2.50
21	6	51	30	21	41.18	8.50	21	1	3	2	1	33.33	3.00
22	7	40	23	17	42.50	5.71	22	2	7	6	1	14.28	3.50
23	2	6	3	3	50.00	3.00	23	2	16	6	10	62.50	8.00
24	6	35	22	13	37.14	5.83	24	1	3	3	..	..	3.00
25	2	12	4	8	66.66	6.00	25	3	16	6	10	62.50	5.33
26	3	26	7	19	73.08	8.67	26	1	11	8	3	27.27	1.10
27	4	24	19	5	20.83	6.00	27	1	3	3	..	..	3.00
28	5	38	16	22	57.89	7.60	28	..	..	..	..	..	..
29	5	30	20	10	33.33	6.00	29	..	..	..	..	..	..
30	5	23	13	10	43.48	4.60	30	..	..	..	..	..	..
31	1	2	2	..	..	2.00	31	..	..	..	..	..	..
32	4	43	19	24	55.81	10.75	32	2	14	5	9	64.28	7.00
33	3	20	19	1	5.00	6.67	33	2	4	3	1	25.00	2.00
34	3	18	13	5	27.77	6.00	34	1	7	3	4	57.14	7.00
35	..	..	..	..	..	..	35	1	5	5	..	..	5.00
36	1	14	6	8	57.14	14.00	36	..	..	..	..	..	..
37	2	17	12	5	29.41	8.50	37	..	..	..	..	..	..
38	2	11	2	9	81.81	5.50	38	..	..	..	..	..	..
39	3	20	9	11	55.00	6.67	39	1	4	2	2	50.00	4.00
40	3	17	3	14	82.35	5.67	40	..	..	..	..	..	..
41	..	..	..	..	..	..	41	..	..	..	..	..	..
42	2	2	2	..	..	1.00	42	..	..	..	..	..	..
43	1	6	3	3	50.00	6.00	43	1	4	3	1	25.00	4.00
44	1	2	1	1	50.00	2.00	44	..	..	..	..	..	..
45	..	..	..	..	..	..	45	..	..	..	..	..	..
46	..	..	..	..	..	..	46	..	..	..	..	..	..
47	..	..	..	..	..	..	47	..	..	..	..	..	..
48	1	4	3	1	25.00	4.00	48	..	..	..	..	..	..
49	1	3	2	1	33.33	3.00	49	..	..	..	..	..	..
50	..	..	..	..	..	..	50	..	..	..	..	..	..
51	..	..	..	..	..	..	51	..	..	..	..	..	..
52	..	..	..	..	..	..	52	..	..	..	..	..	..
53	..	..	..	..	..	..	53	..	..	..	..	..	..
54	..	..	..	..	..	..	54	..	..	..	..	..	..
55	..	..	..	..	..	..	55	..	..	..	..	..	..
56	..	..	..	..	..	..	56	..	..	..	..	..	..
57	..	..	..	..	..	..	57	..	..	..	..	..	..
58	..	..	..	..	..	..	58	..	..	..	..	..	..
59	..	..	..	..	..	..	59	..	..	..	..	..	..
60	..	..	..	..	..	..	60	..	..	..	..	..	..
249	1,169	706	463	39.61	4.87		50	197	123	71	37.56	3.94	

E.—Age of Mother at Birth of 1st Child. Total Ages. 14 to 43.

No. of Years since Birth of 1st Child.	No. of Families.	No. of Children born.	No. of Children alive.	No. of Children dead.	Mortality per cent.	Average No. of Children to each Family.
1	56	59	52	7	11·86	1·05
2	60	88	69	19	21·59	1·46
3	51	99	76	23	23·23	1·83
4	68	190	122	68	35·79	2·80
5	57	163	118	45	27·61	2·86
6	63	208	151	57	27·40	3·30
7	78	273	195	78	28·57	3·50
8	58	215	153	62	28·84	3·71
9	42	190	117	73	38·42	4·52
10	63	295	177	118	40·00	4·68
11	41	191	112	79	41·36	4·66
12	55	306	193	113	36·93	5·56
13	60	310	205	135	39·71	5·66
14	43	276	157	119	43·12	6·42
15	38	256	162	94	36·72	6·74
16	48	288	189	99	34·38	6·00
17	34	201	128	73	36·32	5·91
18	32	181	103	78	43·09	5·66
19	43	298	168	130	43·62	6·93
20	53	351	192	159	45·30	6·62
21	36	282	161	121	42·91	7·83
22	39	283	155	128	45·23	7·26
23	32	239	121	118	49·37	7·17
24	38	288	163	125	43·40	7·58
25	20	125	70	55	44·00	6·25
26	25	186	98	88	47·31	7·14
27	22	163	93	70	42·94	7·41
28	22	158	84	74	46·84	7·18
29	32	248	129	119	47·98	7·75
30	34	283	140	143	50·53	8·32
31	11	84	54	30	35·71	7·64
32	19	154	74	80	51·95	8·10
33	14	85	41	41	48·24	6·07
34	12	103	46	57	55·34	8·58
35	11	62	31	31	50·00	5·64
36	16	136	48	88	64·71	8·50
37	6	59	27	32	54·24	9·83
38	4	29	13	16	55·17	7·25
39	12	116	45	71	61·21	9·67
40	10	86	21	65	75·58	8·60
41	7	61	21	40	65·57	8·71
42	8	13	30	13	36·23	5·37
43	7	80	40	40	50·00	11·43
44	5	41	15	26	63·41	8·20
45	3	33	9	24	72·73	11·00
46	1	7	5	2	28·57	7·00
47	1	5	3	2	40·00	5·00
48	2	7	3	4	57·14	3·50
49	4	36	10	26	72·22	9·00
50	1	7	3	4	57·14	7·00
51	1	14	5	9	64·29	14·00
52	1	17	3	14	82·35	17·00
53	..	..	..	..	..	..
54	2	18	5	13	72·22	9·00
55	..	..	..	..	..	..
56	..	..	..	..	..	..
57	..	..	..	..	..	..
58	..	..	..	..	..	..
59	1	15	7	8	53·33	15·00
60	1	13	1	12	92·31	13·00
	1,506	8,031	4,616	3,418	42·54	5·33

TABLE XX.—*Average of Present Age of Mothers, of Respective Trades Classified, with Averages of Children Born, now Living, and Dead, to each; also Average Age of Mother when First Child Born, with difference between that and Present Age.*

Trades.	Under 20.						20 to 25.					
	Average Age of Mothers.			Average to each Mother of			Average Age of Mothers.			Average to each Mother of		
	When First Child Born.	Present Age.	Difference.	Children Born.	Children now Living.	Dead.	When First Child Born.	Present Age.	Difference.	Children Born.	Children now Living.	Dead.
Labourers .....	18.0	19.0	1.0	1.0	1.0	...	19.8	23.1	3.3	2.4	1.5	0.9
Gunsmiths .....	17.0	19.0	2.0	2.0	2.0	...	20.7	23.0	2.3	1.7	1.2	0.5
Gunmakers .....	...	...	...	...	...	...	19.0	22.4	3.4	2.4	1.6	0.8
Shoemakers .....	...	...	...	...	...	...	18.7	22.5	3.8	3.0	1.5	1.5
Bricklayers .....	...	...	...	...	...	...	20.0	23.0	3.0	2.0	2.0	...
Coopers .....	...	...	...	...	...	...	18.6	23.0	4.4	2.6	1.8	0.8
Engineers .....	...	...	...	...	...	...	...	...	...	...	...	...
Umbrella-makers .....	...	...	...	...	...	...	18.0	22.0	4.0	3.0	...	3.0
Porters .....	16.0	17.0	1.0	1.0	1.0	...	19.0	22.0	3.0	2.0	1.5	0.5
Carmen .....	...	...	...	...	...	...	19.0	22.0	3.0	2.0	2.0	...
Butchers .....	...	...	...	...	...	...	21.0	22.0	1.0	1.0	1.0	...
Sugar-bakers .....	...	...	...	...	...	...	18.0	22.0	4.0	2.0	1.0	1.0
Bakers .....	...	...	...	...	...	...	21.0	23.0	2.0	1.0	1.0	...
Painters .....	...	...	...	...	...	...	...	...	...	...	...	...
Watermen .....	...	...	...	...	...	...	17.3	22.6	5.3	2.0	1.7	0.3
Smiths .....	...	...	...	...	...	...	20.2	23.4	3.2	1.8	1.6	0.2
Sailors .....	16.0	19.0	3.0	1.0	1.0	...	20.5	22.5	2.0	1.0	1.0	...
Tailors .....	...	...	...	...	...	...	17.7	21.3	3.6	1.3	0.7	0.6
Cigar-makers.....	...	...	...	...	...	...	20.4	22.9	2.5	1.6	1.1	0.2
Carpenters .....	...	...	...	...	...	...	17.8	22.0	4.2	2.8	2.2	0.6
Gun-stock-makers....	...	...	...	...	...	...	19.0	20.0	1.0	1.0	1.0	...
Tin-workers .....	...	...	...	...	...	...	22.0	23.0	1.0	1.0	1.0	...
Wheelwrights .....	...	...	...	...	...	...	...	...	...	...	...	...
Shopmen .....	...	...	...	...	...	...	21.0	23.5	2.5	2.0	2.0	...
Widows with in- cumbrance .....	...	...	...	...	...	...	19.7	23.3	3.6	2.0	1.0	1.0
Policemen .....	...	...	...	...	...	...	21.2	22.7	1.5	1.0	0.7	0.3
Printers .....	...	...	...	...	...	...	...	...	...	...	...	...
Clerks .....	...	...	...	...	...	...	...	...	...	...	...	...
Miscellaneous .....	18.0	19.0	1.0	1.0	1.0	...	20.1	22.7	2.6	1.9	1.3	0.6
Averages of Total, including Married Women, having no children .....	17.0	18.6	1.6	1.2	1.2	...	19.7	22.7	3.0	2.0	1.4	0.6
	17.0	18.8	...	0.7	0.7	...	19.7	22.7	...	1.4	1.0	0.4

TABLE XXI.—Average of Present Age of Mothers, of Respective Trades Classified, Age of Mother when First Child Born, with

Trades.	25 to 30.						30 to 35.					
	Average Age of Mothers.			Average to each Mother of			Average Age of Mothers.			Average to each Mother of		
	When First Child Born.	Present Age.	Difference.	Children Born.	Children now living.	Dead.	When First Child Born.	Present Age.	Difference.	Children Born.	Children now Living.	Dead.
Labourers .....	21.5	27.2	5.7	3.0	2.0	1.0	21.6	31.4	9.8	4.9	2.7	2.2
Gunsmiths .....	20.9	27.3	6.4	3.6	2.4	1.2	21.4	32.0	10.6	5.3	3.9	1.4
Gunmakers .....	20.4	26.7	6.3	3.6	2.9	0.7	21.0	32.0	11.0	5.0	3.0	2.0
Shoemakers .....	21.8	26.6	4.8	2.7	1.5	1.2	22.8	31.8	9.0	4.7	3.6	1.1
Bricklayers .....	19.7	26.0	6.3	3.0	1.7	1.3	20.2	31.0	10.8	6.2	3.6	2.6
Coopers .....	21.3	27.1	5.8	3.4	2.2	1.2	23.3	31.7	8.4	4.8	2.1	2.1
Engineers .....	23.2	27.6	4.4	2.4	1.6	0.8	23.8	32.0	8.2	4.0	3.2	0.8
Umbrella-makers .....	20.0	27.0	7.0	3.5	2.5	1.0	22.0	32.0	10.0	6.0	5.0	1.0
Porters .....	21.2	26.6	5.4	3.4	2.8	0.6	21.1	31.5	10.4	6.6	3.7	2.9
Carmen .....	22.8	26.6	3.8	2.0	1.8	0.2	22.9	31.5	8.6	4.6	2.5	2.1
Butchers .....	21.5	28.0	6.5	3.5	2.0	1.5	21.0	32.0	11.0	3.0	3.0	....
Sugar-bakers .....	20.6	26.6	6.0	4.0	3.0	1.0	23.8	30.8	7.0	3.6	2.2	1.4
Bakers .....	20.2	26.0	5.8	3.2	2.2	1.0	22.2	31.4	9.2	4.8	3.6	1.2
Painters .....	20.2	26.6	6.4	3.6	2.4	1.2	21.5	31.2	9.7	1.4	2.5	1.9
Watermen .....	20.0	26.0	6.0	2.2	2.0	0.2	....	....	....	....	....	....
Smiths .....	21.4	25.8	4.4	2.4	1.6	0.8	19.5	31.5	12.0	4.8	3.5	1.3
Sailors .....	22.1	27.6	5.5	3.3	2.0	1.3	21.5	32.6	11.1	5.2	1.9	3.3
Tailors .....	21.8	26.6	4.8	3.2	2.4	0.8	21.7	32.3	10.6	5.0	3.7	1.3
Cigar-makers .....	23.2	26.5	3.3	2.0	2.0	....	19.0	32.0	13.0	5.7	3.3	2.4
Carpenters .....	21.8	26.5	4.7	2.0	1.7	0.3	22.6	31.8	9.2	4.2	3.3	0.9
Gun-stock-makers .....	....	....	....	....	....	....	21.0	31.5	10.5	7.0	3.0	4.0
Tin-workers .....	19.0	26.0	7.0	3.0	3.0	....	19.0	32.0	13.0	7.0	5.0	2.0
Wheelwrights .....	21.3	26.0	4.7	2.0	1.7	0.3	....	....	....	....	....	....
Shopmen .....	23.5	26.0	2.5	1.5	1.0	0.5	22.5	31.0	8.5	4.5	2.0	2.5
Widows with incum- brance .....	21.4	26.7	5.3	2.5	1.5	1.0	22.2	32.2	10.0	3.7	2.5	1.2
Policemen .....	22.5	25.5	3.0	1.5	1.5	....	22.0	30.5	8.5	3.5	3.0	0.5
Printers .....	22.7	28.0	5.3	3.7	2.7	1.0	22.0	30.0	8.0	2.0	2.0	....
Clerks .....	23.5	27.5	4.0	3.0	2.5	0.5	21.0	31.5	7.5	5.0	4.0	1.0
Miscellaneous .....	21.1	27.0	5.9	3.2	2.3	0.9	22.2	31.7	9.5	4.2	2.7	1.5
Averages of Total, including Married Women, having no children .....	21.4	26.9	5.5	3.0	2.1	0.9	22.0	31.7	9.7	4.7	2.9	1.8
	21.4	26.8	....	2.6	1.8	0.8	22.0	31.7	....	4.3	2.7	1.6

with Averages of Children Born, now Living, and Dead to each; also Average Difference between that and Present Age.—Continued.

35 to 40.						40 to 45.						45 to 50.					
Average Age of Mothers.			Average to each Mother of			Average Age of Mothers.			Average to each Mother of			Average Age of Mothers.			Average to each Mother of		
When First Child Born.	Present Age.	Difference.	Children Born.	Children now Living.	Dead.	When First Child Born.	Present Age.	Difference.	Children Born.	Children now Living.	Dead.	When First Child Born.	Present Age.	Difference.	Children Born.	Children now Living.	Dead.
23.3	37.0	13.7	5.1	3.1	2.0	23.4	41.5	18.1	6.3	3.6	2.7	23.9	46.8	22.9	7.7	4.0	3.7
23.0	35.9	8.9	5.1	3.5	1.6	20.2	41.0	20.8	8.5	6.2	2.3	20.3	46.3	26.0	10.3	4.0	6.3
23.2	35.5	12.3	7.0	2.7	4.3	.....	.....	.....	.....	.....	.....	16.5	46.5	30.0	6.5	3.5	3.0
21.8	36.4	14.6	6.3	3.2	3.1	23.1	42.4	18.3	8.2	4.2	4.0	20.2	46.2	26.0	6.2	3.5	2.7
22.4	37.2	14.8	4.2	3.2	1.0	21.3	40.5	19.2	8.0	4.8	3.2	21.5	47.5	26.0	12.5	3.5	9.0
22.0	37.5	15.5	3.5	2.1	1.4	23.2	42.0	18.8	7.6	3.5	4.1	22.8	45.8	23.0	6.6	3.8	2.8
21.7	36.0	14.3	5.7	3.7	2.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	21.0	41.0	20.0	3.0	2.0	1.0	27.7	47.3	19.6	10.7	5.0	5.7
24.0	37.5	13.5	7.5	4.2	3.3	23.6	41.8	18.2	5.6	3.8	1.8	21.7	45.3	23.6	7.0	2.3	4.7
23.0	37.0	14.0	5.4	3.2	2.2	21.4	41.1	19.7	8.0	3.6	4.4	23.0	47.0	24.0	7.0	5.5	1.5
19.0	37.0	18.0	3.5	3.5	.....	25.0	41.5	16.5	11.0	6.5	4.5	22.5	46.0	23.5	6.0	3.5	2.5
23.8	36.8	13.0	6.3	4.3	2.0	18.0	40.0	22.0	10.0	5.0	5.0	20.0	46.5	26.5	3.5	2.0	1.5
21.0	39.0	18.0	12.0	8.0	4.0	26.0	41.5	15.5	6.0	2.2	3.8	25.0	49.0	24.0	5.0	2.0	3.0
24.0	36.0	12.0	6.5	2.5	5.0	26.0	40.2	14.2	6.0	4.2	1.8	25.0	45.0	20.0	7.5	6.0	1.5
18.0	38.0	20.0	8.3	3.3	4.0	20.0	42.0	22.0	6.0	4.5	1.5	23.0	47.0	24.0	8.0	5.5	2.5
20.5	36.0	15.5	8.0	2.5	5.5	22.2	41.8	19.6	8.6	3.4	4.6	23.5	45.0	21.5	8.0	4.5	3.5
24.0	36.5	12.5	4.8	2.7	2.1	23.2	41.4	18.2	5.6	2.0	3.6	23.3	48.3	25.0	6.0	3.3	2.7
21.5	36.4	14.9	7.1	5.0	2.1	24.0	42.5	18.5	8.5	5.1	3.4	25.4	47.1	21.7	5.8	3.4	2.4
26.7	35.0	8.3	1.7	1.7	.....	.....	.....	.....	.....	.....	.....	24.0	48.0	24.0	11.0	10.0	1.0
23.8	37.0	13.2	5.9	3.5	2.4	22.7	41.6	18.9	7.4	4.1	3.3	21.0	46.6	25.6	8.4	3.8	4.6
19.0	38.0	19.0	10.0	10.0	.....	25.0	45.0	20.0	5.0	3.0	2.0	28.0	48.0	20.0	6.0	4.0	2.0
.....	.....	.....	.....	.....	.....	21.0	40.0	19.0	7.0	5.0	2.0	22.7	48.0	25.3	10.5	6.2	4.3
22.5	37.0	14.5	9.0	4.5	4.5	.....	.....	.....	.....	.....	.....	29.0	46.0	17.0	6.0	4.0	2.0
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	21.0	46.0	25.0	8.0	3.0	5.0
23.3	36.6	13.3	4.1	2.5	1.6	23.6	41.5	17.9	5.6	3.8	1.8	23.2	46.4	23.2	6.8	3.3	3.5
23.7	37.0	13.3	5.3	3.0	2.3	24.0	40.0	16.0	4.0	4.0	.....	24.0	46.7	22.7	8.7	4.7	4.0
23.7	38.0	14.3	6.3	3.3	3.0	22.5	40.0	17.5	7.0	3.0	4.0	.....	.....	.....	.....	.....	.....
31.0	38.0	7.0	4.0	3.0	1.0	20.0	42.0	22.0	10.0	8.0	2.0	22.0	45.7	23.7	6.0	3.7	2.3
24.1	36.9	12.8	5.3	3.7	1.6	23.3	41.9	18.6	6.9	4.3	2.6	23.8	46.9	23.1	7.2	3.8	3.4
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
23.1	36.8	13.7	5.4	3.3	2.1	23.2	41.6	18.4	6.8	3.9	2.9	23.3	46.7	23.4	7.4	3.9	3.5
23.1	36.8	.....	5.2	3.2	2.0	23.2	41.6	.....	6.5	3.8	2.7	23.3	46.7	.....	6.8	3.6	3.2

TABLE XXII.—Average of Present Age of Mothers, of Respective Trades Classified, with Averages of Children Born, now Living, and Dead, to each; also Average Age of Mother when First Child Born, with Difference between that and Present Age.—Continued.

Trades.	50 and Upwards.						Unknown.					
	Average Age of Mothers.			Average to each Mother of			Average Age of Mothers.			Average to each Mother of		
	When First Child Born.	Present Age.	Difference.	Children Born.	Children now Living.	Dead.	When First Child Born.	Present Age.	Difference.	Children Born.	Children now Living.	Dead.
Labourers .....	25·6	56·2	30·6	7·0	3·3	3·7	25·5	Dead	.....	6·0	3·5	2·5
Gunsmiths .....	24·6	54·6	30·0	9·7	4·9	4·8	22·0	Dead	.....	13·0	7·0	6·0
Gunmakers .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Shoemakers .....	26·0	56·9	30·9	5·7	3·5	2·2	22·0	Dead	.....	5·5	4·5	1·0
Bricklayers .....	18·0	60·3	42·3	7·0	2·7	4·3	27·0	Dead	.....	6·0	4·0	2·0
Coopers .....	23·4	59·8	36·4	8·5	3·1	5·4	.....	.....	.....	.....	.....	.....
Engineers .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Umbrella-makers .....	25·5	55·0	29·5	8·5	3·5	5·0	.....	.....	.....	.....	.....	.....
Porters .....	25·5	52·5	27·0	7·0	3·5	3·5	20·0	Dead	.....	10·0	7·0	3·0
Carmen .....	26·4	56·8	30·4	7·2	4·2	3·0	.....	.....	.....	.....	.....	.....
Butchers .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sugar-bakers .....	23·5	57·5	34·0	7·5	4·5	3·0	.....	.....	.....	.....	.....	.....
Bakers .....	21·0	51·5	30·5	8·5	4·5	4·0	.....	.....	.....	.....	.....	.....
Painters .....	21·7	56·0	34·3	11·3	3·7	7·6	.....	.....	.....	.....	.....	.....
Watermen .....	20·5	64·5	44·0	12·0	1·5	10·5	.....	.....	.....	.....	.....	.....
Smiths .....	22·0	62·0	40·0	9·5	4·5	5·0	.....	.....	.....	.....	.....	.....
Sailors .....	25·0	54·7	29·7	4·9	2·4	2·5	.....	.....	.....	.....	.....	.....
Tailors .....	24·8	61·7	36·9	8·1	3·4	4·7	17·0	Dead	.....	8·0	7·0	1·0
Cigar-makers .....	23·0	56·0	33·0	9·1	3·5	5·6	.....	.....	.....	.....	.....	.....
Carpenters .....	25·0	55·7	30·7	8·4	4·3	4·1	.....	.....	.....	.....	.....	.....
Gun-stock-makers .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tin-workers .....	34·0	57·0	23·0	8·0	3·0	5·0	.....	.....	.....	.....	.....	.....
Wheelwrights .....	35·0	56·0	21·0	3·0	2·0	1·0	.....	.....	.....	.....	.....	.....
Shopmen .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Widows with in- cumbrance .....	22·9	58·5	35·6	7·4	3·5	3·9	.....	.....	.....	.....	.....	.....
Police-men .....	23·3	50·6	27·3	8·0	1·7	6·3	.....	.....	.....	.....	.....	.....
Printers .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Clerks .....	24·8	53·3	28·5	6·0	3·2	2·8	.....	.....	.....	.....	.....	.....
Miscellaneous .....	25·5	58·2	32·7	6·7	3·5	3·2	25·2	Dead	.....	5·5	3·7	1·8
Averages of Total including Married Women, having no children .....	24·7	57·3	32·6	7·3	3·5	3·8	24·2	Dead	.....	6·4	4·3	2·1
	24·7	57·3	.....	7·1	3·4	3·7	24·2	Dead	.....	6·4	4·3	2·1

TABLE XXIII.—Totals of Present Age of Mothers, of Respective Trades Classified, with Children Born, now Living, and Dead; and Total Ages of Married Women having no Children inserted under Respective Classified Ages and Trades.

	Under 20.						20 to 25.						25 to 30.					
	Age of Mother		Difference in Years.	Children Born.	Children now Living.	Dead.	Age of Mother		Difference in Years.	Children Born.	Children now Living.	Dead.	Age of Mother		Difference in Years.	Children Born.	Children now Living.	Dead.
	When first child born.	Present Age.					When first child born.	Present Age.					When first child born.	Present Age.				
Labourers .....	(1) 18	19	1	1	1	...	(16) 317 (12) (282)	370	53	39	24	15	(44) 946 (5) (130)	1,197	251	132	91	41
Guusmiths .....	(1) 17 (1) (19)	19	2	2	2	...	(13) 269 (3) (62)	299	30	22	15	7	(28) 586 (3) (77)	764	178	101	65	33
Gunmakers .....	...	...	...	...	...	...	(5) 95 (6)	112	17	12	8	4	(7) 143 (1) (25)	187	44	25	20	5
Shoemakers .....	...	...	...	...	...	...	(6) 112 (1) (22)	135	23	18	9	9	(21) 458 (1) (27)	558	100	57	31	26
Bricklayers .....	...	...	...	...	...	...	(2) 40 (5)	46	6	4	4	...	(3) 59 (1) (28)	78	19	9	5	4
Coopers .....	...	...	...	...	...	...	(5) 93 (2) (45)	115	22	13	9	4	(10) 213 (2) (51)	271	58	34	22	12
Engineers .....	...	...	...	...	...	...	...	...	...	...	...	...	(5) 116 (2)	138	22	12	8	4
Umbrella-makers ..	...	...	...	...	...	...	(1) 18 (2)	22	4	3	...	3	(2) 40 (5)	54	14	7	5	2
Porters .....	(1) 16	17	1	1	1	...	(3) 38 (1)	44	6	4	3	1	(5) 106 (3)	133	27	17	14	3
Carmen .....	...	...	...	...	...	...	(3) 57 (1) (21)	66	9	6	6	...	(5) 114 (4) (110)	133	19	10	9	1
Butchers.....	...	...	...	...	...	...	(1) 21 (19)	22	1	1	1	...	(2) 43 (5)	56	13	7	4	3
Sugar-bakers.....	...	...	...	...	...	...	(1) 18 (1) (22)	22	4	2	1	1	(5) 103 (1) (25)	133	30	20	15	5
Bakers .....	...	...	...	...	...	...	(1) 21 (5)	23	2	1	1	...	(5) 101 (1) (26)	130	29	16	11	5
Painters .....	...	...	...	...	...	...	...	...	...	...	...	...	(5) 101 (1) (22)	133	32	18	12	6
Watermen .....	...	...	...	...	...	...	(3) 52 (5)	68	16	6	5	1	(4) 80 (5)	104	24	9	8	1
Smiths .....	...	...	...	...	...	...	(4) 101 (89)	117	16	9	8	1	(5) 107 (3)	129	22	12	8	4
Sailors.....	(1) 16	19	3	1	1	...	(2) 41 (5) (111)	45	4	2	2	...	(14) 310 (4) (105)	387	77	46	28	18
Tailors .....	...	...	...	...	...	...	(3) 53 (1) (23)	64	11	4	2	2	(11) 240 (5) (130)	293	53	36	27	9
Cigar-makers.....	...	...	...	...	...	...	(8) 163 (1) (20)	183	20	13	11	2	(4) 93 (6)	106	13	8	8	...
Carpenters.....	...	...	...	...	...	...	(6) 107 (1) (23)	132	25	17	13	4	(6) 131 (1) (28)	159	28	12	10	2
Gun-stock-makers ..	...	...	...	...	...	...	(1) 19 (1)	20	1	1	1	...	...	...	...	...	...	...
Tin-workers .....	...	...	...	...	...	...	(1) 22 (3)	23	1	1	1	...	(1) 19 (3)	26	7	3	3	...
Wheelwrights .....	...	...	...	...	...	...	...	...	...	...	...	...	(3) 64 (2)	78	14	6	5	1
Shopmen .....	...	...	...	...	...	...	(2) 42 (1) (23)	47	5	4	4	...	(2) 47 (1) (26)	52	5	3	2	1
Widows .....	...	...	...	...	...	...	(3) 59 (4)	70	11	6	3	3	(5) 171 (2)	240	69	23	14	9
Policemen .....	...	...	...	...	...	...	(4) 55 (3)	91	6	4	3	1	(3) 45 (2)	51	6	3	3	...
Printers .....	...	...	...	...	...	...	...	...	...	...	...	...	(3) 68 (2)	84	16	11	8	3
Clerks.....	...	...	...	...	...	...	...	...	...	...	...	...	(2) 47 (61)	55	8	6	5	1
Miscellaneous .....	(1) 18	19	1	1	1	...	(23) 502 (10)	567	65	47	33	14	(273) 1,289 (44) (343)	1,648	359	200	142	58
Total .....	(5) 85 (4)	93 (76)	8	6	6	...	(119) 2,345 (45)	2,703	358	239	167	72	(273) 5,840 (44) (1,136)	7,377	1,537	843	586	257

TABLE XXIV.—Totals of Present Age of Mothers, of Respective Trades Classified, with Children Born, now Living, and Dead; and Total Ages of Married Women having no Children inserted under Respective Classified Ages and Trades.—Continued.

	30 to 35.						35 to 40.						40 to 45.					
	Age of Mother		Difference in Years.	Children Born.		Dead.	Age of Mother		Difference in Years.	Children Born.		Dead.	Age of Mother		Difference in Years.	Children Born.		Dead.
	When first child born.	Present Age.		Children now living.	When first child born.		Present Age.	Children now living.		When first child born.	Present Age.		Children now living.					
Labourers .....	(51) 1104 (6)	1634 (188)	530	259	142	117	(50) 1165 (6)	1850 (222)	685	254	154	100	(48) 1123 (2)	1993 (86)	870	305	173	132
Gunsmiths .....	(9) 193 (3)	288	95	48	33	13	(8) 181 (4)	287	103	41	28	13	(4) 81 (1)	164	83	34	25	9
Gunmakers .....	(13) 63 (3)	96	33	15	9	6	(11) 93 (3)	142	49	28	11	17	(11) ... (1)	...	...	...	...	...
Shoemakers .....	(3) 297 (3)	413 (94)	116	62	47	15	(3) 240 (12)	401	161	70	36	34	(5) 254 (12)	466	212	90	46	44
Bricklayers .....	(5) 101 (11)	155	54	31	18	13	(8) 112 (4)	186	71	31	16	5	(8) 128 (5)	243	115	48	29	19
Coopers .....	(3) 257 (5)	381	124	58	33	25	(4) 176 (1)	300	121	28	17	11	(8) 186 (1)	336	150	61	28	33
Engineers .....	(1) 119 (1)	160 (30)	41	20	16	4	(4) 87 (1)	144	57	23	15	8	(1) ... (5)	...	...	...	...	...
Umbrella-makers .....	(7) 22 (13)	32	10	6	5	1	(4) ... (5)	...	...	...	...	...	(5) 21 (7)	41	20	3	2	1
Porters .....	(13) 145 (1)	221 (30)	73	46	26	20	(5) 96 (11)	150	51	30	17	13	(7) 118 (2)	209	91	28	19	9
Carmen .....	(1) 298 (1)	410 (30)	112	60	33	27	(2) 115 (35)	185	70	27	16	11	(2) 150 (1)	288	138	56	25	31
Butchers .....	(1) 21 (5)	32 (30)	11	3	3	...	(6) 35 (1)	74	36	7	7	...	(1) 50 (4)	83	33	22	13	9
Sugar-bakers .....	(5) 119 (5)	154	35	18	11	7	(1) 143 (1)	221	78	28	26	12	(4) 18 (1)	40	22	10	5	5
Bakers .....	(7) 111 (1)	157 (98)	46	24	18	6	(2) 21 (3)	39	18	12	8	4	(4) 104 (1)	166 (40)	62	24	9	15
Painters .....	(1) 151 (1)	219 (31)	65	31	18	13	(3) 48 (1)	72	24	13	5	8	(2) 104 (1)	161	57	24	17	7
Watermen .....	(6) ... (2)	...	...	...	...	...	(2) 53 (1)	114	61	25	10	15	(5) 40 (1)	84 (41)	44	12	9	3
Smiths .....	(9) 117 (9)	189 (62)	72	29	21	8	(13) 41 (1)	72	31	16	5	11	(3) 111 (1)	209 (43)	98	40	17	23
Sailors .....	(11) 194 (3)	294	100	47	17	30	(10) 361 (3)	548	187	73	41	32	(8) 116 (1)	207 (40)	91	28	10	18
Tailors .....	(3) 239 (9)	356	117	55	41	14	(15) 215 (1)	364	149	71	50	21	(1) 192 (40)	340	148	68	41	27
Cigar-makers .....	(9) 57 (4)	96	39	17	10	7	(8) 80 (1)	105	25	5	5	...	(8) 182 (1)	333 (40)	151	59	33	26
Carpenters .....	(2) 42 (1)	63	21	14	6	8	(1) 19 (2)	38	19	10	10	...	(1) 25 (4)	45 (43)	20	5	3	2
Tin-workers .....	(1) 19 (2)	32	13	7	5	2	(2) ... (1)	...	...	...	...	...	(2) 42 (1)	80	38	14	10	4
Wheelwrights .....	(2) ... (17)	...	...	...	...	...	(1) 45 (36)	74	29	18	9	9	(21) ... (1)	...	...	...	...	...
Shopmen .....	(4) 378 (1)	548	170	63	43	20	(3) 443 (3)	695	252	78	48	30	(1) 497 (1)	872	375	118	79	39
Policemen .....	(1) 88 (2)	122	34	14	12	2	(3) 71 (1)	111	40	16	9	7	(2) 24 (1)	40	16	4	4	...
Printers .....	(2) 22 (32)	30	8	2	2	...	(1) 71 (1)	114	43	19	10	9	(1) 45 (16)	80	35	14	6	8
Clerks .....	(1) 48 (3)	63	15	10	8	2	(32) 31 (1)	38	7	4	3	1	(2) 20 (2)	42	22	10	8	2
Miscellaneous .....	(3) 1157 (21)	1652 (657)	495	220	141	79	(1) 771 (9)	1182 (330)	411	171	118	53	(197) 933 (11)	1676 (54)	743	279	174	105
Total .....	(21) 5614 (21)	8146 (657)	2532	1206	754	452	(219) 5076 (9)	8061 (330)	2985	1187	727	460	(197) 4564 (11)	8198 (54)	3634	1356	785	571

TABLE XXV.—Totals of Present Age of Mothers, of Respective Trades Classified, with Children Born, now Living, and Dead; and Total Ages of Married Women having no Children inserted under Respective Classified Ages and Trades.—Continued.

	45 to 50.						50 and upwards.						Unknown.					
	Age of Mother		Difference in Years.	Children Born.	Children now Living.	Dead.	Age of Mother		Difference in Years.	Children Born.	Children now Living.	Dead.	Age of Mother		Difference in Years.	Children Born.	Children now Living.	Dead.
	When first child born.	Present Age.					When first child born.	Present Age.					When first child born.	Present Age.				
Labourers .....	(30) 716	(93) 1404	688	232	120	112	(58) 1186	(131) 3263	1777	408	192	216	(2) 51	Dead	...	12	7	5
Gunsmiths .....	(3) 61	(93) 139	78	31	12	19	(9) 222	(131) 492	270	87	44	43	(1) 22	Dead	...	13	7	6
Gunmakers .....	(2) 33	(93) 93	60	13	7	6	...	...	...	...	...	...	(1) ...	...	...	...	...	...
Shoemakers .....	(4) 81	(142) 185	104	25	14	11	(13) 339	740	401	75	46	29	(1) 22	Dead	...	11	9	2
Bricklayers.....	(2) 43	(93) 95	52	25	7	18	(3) 54	181	127	21	8	13	(1) 27	Dead	...	6	4	2
Coopers .....	(5) 114	(88) 229	115	33	19	14	(8) 187	(50) 478	291	68	25	43	...	...	...	...	...	...
Engineers .....	(2) ...	(88) ...	...	...	...	...	(1) ...	...	...	...	...	...	...	...	...	...	...	...
Umbrella-makers ...	(1) 83	(47) 142	59	32	15	17	(2) 51	110	59	17	7	10	...	...	...	...	...	...
Porters .....	(3) 65	(93) 136	71	21	7	14	(4) 102	210	108	28	14	14	(1) 20	Dead	...	10	7	3
Carmen .....	(2) 46	(48) 94	48	14	11	3	(5) 132	284	152	36	21	15	...	...	...	...	...	...
Butchers.....	(1) 45	(48) 92	47	12	7	5	...	...	...	...	...	...	...	...	...	...	...	...
Sugar-bakers.....	(2) 40	(93) 93	52	7	4	3	(2) 47	115	68	15	9	6	...	...	...	...	...	...
Bakers .....	(1) 25	(47) 49	21	5	2	3	(2) 42	103	61	17	9	8	...	...	...	...	...	...
Painters .....	(2) 50	(45) 90	46	15	12	3	(3) 65	168	103	34	11	23	...	...	...	...	...	...
Watermen .....	(1) 46	(45) 94	48	16	11	5	(2) 41	129	88	24	3	21	...	...	...	...	...	...
Smiths.....	(2) 47	(93) 90	43	16	9	7	(2) 44	124	80	19	9	10	...	...	...	...	...	...
Sailors.....	(3) 70	(93) 145	75	18	10	8	(7) 175	353	308	34	17	17	...	...	...	...	...	...
Tailors .....	(9) 229	(93) 424	195	53	31	22	(9) 223	555	332	73	31	42	(1) 17	Dead	...	8	7	1
Cigar-makers.....	(8) 24	(93) 48	24	11	10	1	(6) 138	336	198	55	21	34	...	...	...	...	...	...
Carpenters.....	(16) 168	(93) 373	205	67	30	37	(1) 126	947	521	143	74	69	...	...	...	...	...	...
Gun-stock-makers ..	(2) 28	(93) 48	26	6	4	2	...	...	...	...	...	...	...	...	...	...	...	...
Tin-workers .....	(1) 91	(93) 192	101	42	25	17	(1) 34	57	23	8	3	5	...	...	...	...	...	...
Wheelwrights .....	(1) 29	(93) 46	17	6	4	2	(1) 35	56	21	3	2	1	...	...	...	...	...	...
Shopmen .....	(3) 63	(93) 138	75	24	9	15	...	...	...	...	...	...	...	...	...	...	...	...
Widows with in- cumbrance .....	(19) 441	(48) 883	442	120	64	66	(3) 1264	3339	2075	423	202	221	...	...	...	...	...	...
Policemen .....	(3) 72	(93) 140	68	26	14	12	(3) 70	152	82	24	5	19	...	...	...	...	...	...
Printers .....	...	...	71	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Clerks .....	(3) 66	(93) 137	762	18	11	7	(4) 99	213	114	21	13	11	...	...	...	...	...	...
Miscellaneous .....	(33) 787	(48) 1519	1549	238	125	113	(58) 1739	4136	2397	476	251	225	(11) 277	Dead	...	61	41	20
Total .....	(153) 3563	(631) 7148	3585	1126	594	542	(284) 7015	16571	9556	2112	1017	1095	(18) 456	Dead	...	121	82	39

TABLE XXVI.—Totals of present Age of Mothers of respective

Trades.	Under 20.						20 to 25.					
	Total Ages of Mothers		Difference in Years.	Children born.	Children now living.	Dead.	Total Ages of Mothers		Difference in Years.	Children born.	Children now living.	Dead.
	When First Child born.	Present Age.					When First Child born.	Present Age.				
Labourers .....	18	19	1	1	1	....	317	370	53	39	21	15
Gunsmiths .....	17	19	2	2	2	....	269	299	30	22	15	7
Gunmakers .....	....	....	....	....	....	....	95	112	17	12	8	4
Shoemakers .....	....	....	....	....	....	....	112	135	23	18	9	9
Bricklayers .....	....	....	....	....	....	....	40	46	6	4	4	....
Coopers .....	....	....	....	....	....	....	93	115	22	13	9	4
Engineers .....	....	....	....	....	....	....	....	....	....	....	....	....
Umbrella-makers ..	....	....	....	....	....	....	18	22	4	3	....	3
Porters .....	16	17	1	1	1	....	38	44	6	4	3	1
Carmen .....	....	....	....	....	....	....	57	66	9	6	6	....
Butchers .....	....	....	....	....	....	....	21	22	1	1	1	....
Sugar-bakers .....	....	....	....	....	....	....	18	22	4	2	1	1
Bakers .....	....	....	....	....	....	....	21	23	2	1	1	....
Painters .....	....	....	....	....	....	....	....	....	....	....	....	....
Watermen .....	....	....	....	....	....	....	52	68	16	6	5	1
Smiths .....	....	....	....	....	....	....	101	117	16	9	8	1
Sailors .....	16	19	3	1	1	....	41	45	4	2	2	....
Tailors .....	....	....	....	....	....	....	53	64	11	4	2	2
Cigar-makers .....	....	....	....	....	....	....	163	183	20	13	11	2
Carpenters .....	....	....	....	....	....	....	107	132	25	17	13	4
Gun-stock-makers ..	....	....	....	....	....	....	19	20	1	1	1	....
Tin-workers .....	....	....	....	....	....	....	22	23	1	1	1	....
Wheelwrights .....	....	....	....	....	....	....	....	....	....	....	....	....
Shopmen .....	....	....	....	....	....	....	42	47	5	4	4	....
Widows with in- cumbrance .....	....	....	....	....	....	....	59	70	11	6	3	3
Policemen .....	....	....	....	....	....	....	85	91	6	4	3	1
Printers .....	....	....	....	....	....	....	....	....	....	....	....	....
Clerks .....	....	....	....	....	....	....	....	....	....	....	....	....
Miscellaneous .....	18	19	1	1	1	....	502	567	65	47	33	11
Married Women } having no children }	85	93	8	6	6	....	2,345	2,703	358	239	167	72
	....	76	....	....	....	....	....	1,016	....	....	....	....
Total .....	85	169	....	6	6	....	2,315	3,719	....	239	167	72

*Trades, classified with Children Born, now Living and Dead.*

25 to 30.						30 to 35.						35 to 40.											
Total Ages of Mothers		When First Child born.	Present Age.	Difference in Years.	Children born.	Children now living.	Dead.	Total Ages of Mothers		When First Child born.	Present Age.	Difference in Years.	Children born.	Children now living.	Dead.	Total Ages of Mothers		When First Child born.	Present Age.	Difference in Years.	Children born.	Children now living.	Dead.
946	1197	251	132	91	41	1104	1634	530	259	142	117	1165	1850	685	254	154	100						
586	764	178	101	68	33	193	288	95	48	35	13	184	287	103	41	28	13						
143	187	44	25	20	5	63	96	33	15	9	6	93	142	49	28	11	17						
458	558	100	57	31	26	297	413	116	62	47	15	240	401	161	70	36	34						
59	78	19	9	5	4	101	155	54	31	18	13	112	186	74	21	16	5						
213	271	58	34	22	12	257	381	124	58	33	25	176	300	124	28	17	11						
116	138	22	12	8	4	119	160	41	20	16	4	87	144	57	23	15	8						
40	54	14	7	5	2	22	32	10	6	5	1	.....	.....	.....	.....	.....	.....						
106	133	27	17	14	3	148	221	73	46	26	20	96	150	54	30	17	13						
114	133	19	10	9	1	298	410	112	60	33	27	115	185	70	27	16	11						
43	56	13	7	4	3	21	32	11	3	3	.....	38	74	36	7	7	.....						
103	133	30	20	15	5	119	154	35	18	11	7	143	221	78	38	26	12						
101	130	29	16	11	5	111	157	46	24	18	6	21	39	18	12	8	4						
101	133	32	18	12	6	151	219	68	31	18	13	48	72	24	13	5	8						
80	104	24	9	8	1	.....	.....	.....	.....	.....	.....	53	114	61	25	10	15						
107	129	22	12	8	4	117	189	72	29	21	8	41	72	31	16	5	11						
310	387	77	46	28	18	194	294	100	47	17	30	361	548	187	73	41	32						
240	293	53	36	27	9	239	356	117	55	41	14	215	364	149	71	50	21						
93	106	13	8	8	.....	57	96	39	17	10	7	80	105	25	5	5	.....						
131	159	28	12	10	2	204	287	83	38	30	8	357	555	198	89	53	36						
.....	.....	.....	.....	.....	.....	42	63	21	14	6	8	19	38	19	10	10	.....						
19	26	7	3	3	.....	19	32	13	7	5	2	.....	.....	.....	.....	.....	.....						
64	78	14	6	5	1	.....	.....	.....	.....	.....	.....	45	74	29	18	9	9						
47	52	5	3	2	1	45	62	17	9	4	5	.....	.....	.....	.....	.....	.....						
[1]																							
171	240	69	23	14	9	378	548	170	63	43	20	443	695	252	78	48	30						
45	51	6	3	3	.....	88	122	34	14	12	2	71	111	40	16	9	7						
68	84	16	11	8	3	22	30	8	2	2	.....	71	114	43	19	10	9						
47	55	8	6	5	1	48	63	15	10	8	2	31	38	7	4	3	1						
1289	1648	359	200	142	58	1157	1652	495	220	141	79	771	1182	411	171	118	53						
[1]						[2]																	
5840	7377	1537	843	586	257	5614	8146	2532	1206	754	452	5076	8061	2985	1187	727	160						
.....	1156	.....	.....	.....	.....	.....	657	.....	.....	.....	.....	.....	330	.....	.....	.....	.....						
5840	8533	.....	843	586	257	5614	8803	.....	1206	754	452	5076	8391	.....	1187	727	460						

TABLE XXVI.—Totals of present Age of Mothers of respective Trades,

Trades.	40 to 45.						45 to 50.					
	Total Ages of Mothers		Difference in Years.	Children born.	Children now living.	Dead.	Total Ages of Mothers		Difference in Years.	Children born.	Children now living.	Dead.
	When First Child born.	Present Age.					When First Child born.	Present Age.				
Labourers .....	1,123	1,993	870	305	173	132	716	1,404	688	232	120	112
Gunsmiths .....	81	164	83	34	25	9	61	139	78	31	12	19
Gunmakers .....	.....	.....	.....	.....	.....	.....	33	93	60	13	7	6
Shoemakers .....	254	466	212	90	46	44	81	185	104	25	11	11
Bricklayers .....	128	243	115	48	29	19	43	95	52	25	7	18
Coopers .....	186	336	150	61	28	33	114	229	115	33	19	14
Engineers .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Umbrella-makers .....	21	41	20	3	2	1	83	142	59	32	15	17
Porters .....	118	209	91	28	19	9	65	136	71	21	7	14
Carmen .....	150	288	138	56	25	31	46	94	48	14	11	3
Butchers .....	50	83	33	22	13	9	45	92	47	12	7	5
Sugar-bakers .....	18	40	22	10	5	5	40	93	53	7	4	3
Bakers .....	104	166	62	24	9	15	25	49	24	5	2	3
Painters .....	104	161	57	24	17	7	50	90	40	15	12	3
Watermen .....	40	84	44	12	9	3	46	94	48	16	11	5
Smiths .....	111	209	98	40	17	23	47	90	43	16	9	7
Sailors .....	116	207	91	28	10	18	70	145	75	18	10	8
Tailors .....	192	340	148	68	41	27	229	424	195	53	31	22
Cigar-makers .....	.....	.....	.....	.....	.....	.....	24	48	24	11	10	1
Carpenters .....	182	333	151	59	33	26	168	373	205	67	30	37
Gun-stock-makers .....	25	45	20	5	3	2	28	48	20	6	4	2
Tin-workers .....	42	80	38	14	10	4	91	192	101	42	25	17
Wheelwrights .....	.....	.....	.....	.....	.....	.....	29	46	17	6	4	2
Shopmen .....	.....	.....	.....	.....	.....	.....	63	138	75	24	9	15
Widows with in- cumbrance.....	497	872	375	118	79	39	441	883	442	136	61	66
Policemen .....	24	40	16	4	4	.....	72	140	68	26	14	12
Printers .....	45	80	35	14	6	8	.....	.....	.....	.....	.....	.....
Clerks .....	20	42	22	10	8	2	66	137	71	18	11	7
Miscellaneous .....	933	1,676	743	279	174	105	787	1,549	762	238	125	113
Married Women having no children	4,561	8,198	3,634	1,356	785	571	3,563	7,148	3,585	1,136	591	542
	.....	454	.....	.....	.....	.....	.....	651	.....	.....	.....	.....
Total .....	4,561	8,652	.....	1,356	785	571	3,563	7,799	.....	1,136	591	542

classified with Children Born, now Living, and Dead.—Continued.

50 and Upwards.						Unknown.					
Total Ages of Mothers		Difference in Years.	Children born.	Children now living.	Dead.	Total Ages of Mothers		Difference in Years.	Children born.	Children now living.	Dead.
When First Child born.	Present Age.					When First Child born.	Present Age.				
1,486	3,263	1,777	408	192	216	51	Dead	....	12	7	5
222	492	270	87	44	43	22	Dead	....	13	7	6
....	....	....	....	....	....	....	....	....	....	....	....
339	740	401	75	46	29	22	Dead	....	11	9	2
54	181	127	21	8	13	27	Dead	....	6	4	2
187	478	291	68	25	43	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....
51	110	59	17	7	10	....	....	....	....	....	....
102	210	108	28	14	14	20	Dead	....	10	7	3
132	284	152	36	21	15	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....
47	115	68	15	9	6	....	....	....	....	....	....
42	103	61	17	9	8	....	....	....	....	....	....
65	168	103	34	11	23	....	....	....	....	....	....
41	129	88	21	3	21	....	....	....	....	....	....
44	124	80	19	9	10	....	....	....	....	....	....
175	383	208	34	17	17	....	....	....	....	....	....
223	555	332	73	31	42	17	Dead	....	8	7	1
138	336	198	55	21	34	....	....	....	....	....	....
426	947	521	143	74	69	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....
34	57	23	8	3	5	....	....	....	....	....	....
35	56	21	3	2	1	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....
[2]	3,339	....	....	....	....	....	....	....	....	....	....
1,264	....	2,075	423	202	221	....	....	....	....	....	....
70	152	82	24	5	19	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....
99	213	114	24	13	11	....	....	....	....	....	....
[3]	....	....	....	....	....	....	....	....	....	....	....
1,739	4,136	2,397	476	251	225	277	Dead	....	61	41	20
[5]	....	....	....	....	....	....	....	....	....	....	....
7,015	16,571	9,556	2,112	1,017	1,095	436	Dead	....	121	82	39
....	459	....	....	....	....	....	....	....	....	....	....
7,015	17,030	....	2,112	1,017	1,095	436	Dead	....	121	82	39

*A Statistical View of the Principal Public Libraries in Europe and the United States of North America.* By EDWARD EDWARDS, Esq., of the British Museum.

[Read before the Statistical Society of London, 20th March, 1848.]

In very few branches of statistical inquiry is it more difficult to arrive at well-grounded and precise results than in that to which this paper refers. Yet an accurate computation of the extent of the Public Libraries in the several States of Europe, and of the amounts expended in their maintenance and enlargement, (compared with the population and resources of the respective countries,) ought undoubtedly to enter, as a subsidiary element, into any estimate of the *educational* condition of such States.

The mere *extent* of a library, whether public or private, will, of course, afford but an imperfect indication of its real value to the student; but if to this be added the element of *growth*, by comparing its extent at two several periods, some notion, approximate at least, may be formed of that value.

In preparing the following table, I have found it especially difficult to procure accurate data with respect to the smaller libraries. I have therefore included in it such public libraries only as contain, or are believed to contain, 10,000 volumes and upwards. And it may, perhaps, be said with truth, that libraries of smaller extent than this cannot in our own day be of much value, except in very small towns.

There is still greater difficulty in some cases, in correctly determining what constitutes a *public* library strictly so called. There are many valuable libraries belonging to academies, societies, and corporations, (especially in our own country and in France), which in one sense may be termed public, inasmuch as they are accessible to persons of known reputation in literature and science, although unconnected with the proprietary bodies. I have, however, thought it best to confine myself (or have so endeavoured,) to such libraries as are really open to the public at large, more or less restrictedly, or to such as derive their support, either in the whole or in part, from public sources. I have included the libraries of Universities, howsoever maintained, as clearly partaking more of a public than of a private nature, and also certain conventual libraries known to be publicly accessible.

The number of public libraries in Europe contained within these limits, I believe to be 383. Of these 107 are in France, 41 in the Austrian States and in the kingdom of Lombardy and Venice, 30 in the Prussian States, 28 in Great Britain and Ireland (including Malta), 17 in Spain, 15 in the Papal States, 14 in Belgium, 13 in Switzerland, 12 in the Russian Empire, 11 in Bavaria, 9 in Tuscany, 9 in Sardinia, 8 in Sweden, 7 in Naples, 7 in Portugal, 5 in Holland, 5 in Denmark, 5 in Saxony, 4 in Baden, 4 in Hesse, 3 in Wirtemberg, and 3 in Hanover.

Comparing the aggregate number of volumes in these libraries with the aggregate population *of the cities which contain them*, we have in Great Britain and Ireland, 43 volumes to every 100 inhabitants; in Russia 80 to every 100; in Spain, 106; in France, 125; in the Austrian Empire, 159; in the Prussian States, 196; in Parma, 204; in Mecklenburgh, 238; in Hesse, 256; in the Papal States, 266; in Nassau, 267; in Tuscany, 268; in Modena, 333; in Switzerland, 340; in Bavaria, 347; in Saxony, 379; in Saxe-Meiningen, 400; in Denmark, 412; in Baden, 480; in Saxe-Coburg-Gotha, 551; in Hesse-Darmstadt, 660; in Wirtemberg, 716; in Saxe-Weimar, 881; in Hanover, 972; in Oldenburgh, 1078; and in Brunswick, 2353 volumes, to every 100 inhabitants of the cities containing libraries (of 10,000 volumes and upwards).

Comparing the number of volumes in the libraries of the chief European *capitals* with their respective populations, we find in Weimar, 803 volumes to every 100 inhabitants; in Munich, 750; in Darmstadt, 652; in Copenhagen, 465; in Stuttgart, 452; in Dresden, 432; in Hanover, 335; in Florence, 313; in Rome, 306; in Parma, 278; in Prague, 168; in Berlin, 162; in Madrid, 153; in Paris, 143; in Venice, 142; in Milan, 135; in Vienna, 119; in Edinburgh, 116; in Petersburg, 108; in Brussels, 100; in Stockholm, 98; in Naples, 69; in Dublin, 49; in Lisbon, 39; in London, 20.

We see, therefore, that Brussels is 5 times better provided in this respect than London; Paris, 7 times; Dresden, 21 times; Copenhagen, 23 times; Munich, 37 times; and the little city of Weimar, 40 times.

The PRINCIPAL LIBRARIES of the several capital cities of Europe may be arranged in the following order:

1. PARIS (1), National Library.....	800,000	volumes.
2. MUNICH, Royal Library .....	600,000	"
3. BERLIN, Royal Library .....	470,000	"
4. PETERSBURGH, Imperial Library .....	446,000	"
5. COPENHAGEN, Royal Library .....	410,000	"
6. LONDON, British Museum Library .....	350,000	"
7. VIENNA, Imperial Library .....	313,000	"
8. DRESDEN, Royal Library.....	300,000	"
9. MADRID, National Library .....	200,000	"
10. WOLFENBUTTEL, Ducal Library .....	200,000	"
11. PARIS (2), Arsenal Library .....	180,000	"
12. STUTTGARD, Royal Library .....	174,000	"
13. MILAN, Brera Library .....	170,000	"
14. PARIS (3), St. Geneviève Library .....	150,000	"
15. DARMSTADT, Grand-Ducal Library.....	150,000	"
16. FLORENCE, Magliabecchian .....	150,000	"
17. NAPLES, Royal Library .....	150,000	"
18. BRUSSELS, Royal Library .....	133,500	"
19. ROME (1), Casanate Library .....	120,000	"
20. HAGUE, Royal Library .....	100,000	"
21. PARIS (4), Mazarine Library .....	100,000	"
22. ROME (2), Vatican Library .....	100,000	"
23. PARMA, Ducal Library .....	100,000	"

The libraries of Paris, (except that of the Arsenal), Munich, Berlin, Copenhagen, Dresden, Wolfenbuttel, Milan, Naples, Brussels, the Hague, and Parma, are *lending* libraries, *i. e.* their books, more or

less restrictedly, are permitted to be borrowed by persons duly introduced.

The National Libraries of Paris and Madrid, the Royal Libraries of Paris, Munich, Berlin, Copenhagen, Vienna, Naples, Brussels, and the Hague, the Brera Library at Milan, the Magliabecchian at Florence, and the Ducal Library of Parma, together with the library of the British Museum, are entitled by law to a copy of every book published within the states to which they respectively belong\*.

The oldest of the great libraries of printed books is probably that of Vienna, which dates from 1440, and is said to have been opened to the public as early as 1575. The Town Library of Ratisbon dates from 1430; St. Mark's Library at Venice, from 1468; the Town Library of Frankfort, from 1484; that of Hamburg, from 1529; of Strasburgh, from 1531; of Augsburg, from 1537; those of Berne and Geneva, from 1550; that of Basel, from 1564.

The Royal Library of Copenhagen was founded about 1550. In 1671 it possessed 10,000 volumes; in 1748, about 65,000; in 1778, 100,000; in 1820, 300,000†; and it now contains 410,000 volumes. The National Library of Paris was founded in 1595, but was not made public until 1737. In 1640 it contained about 17,000 volumes; in 1684, 50,000; in 1775, 150,000; in 1790, 200,000. It now possesses at least 800,000 volumes. The library of the British Museum was founded in 1753, and was opened to the public in 1757, with about 40,000 volumes. In 1800, it contained about 65,000 volumes; in 1823, 125,000; in 1836, 240,000; and it now contains upwards of 374,000 volumes.

The steady growth of the Copenhagen library was mainly owing to the judicious *purchases* at favourable opportunities. The enormous increase of the magnificent National Library of Paris, since 1790, is in great measure to be ascribed to the Revolution: the suppression of the monasteries and convents, and the confiscation of the property of rebels and emigrants having placed a multitude of fine libraries at the disposal of the ruling powers of the day. And although, in some cases, large numbers of books and MSS. were summarily disposed of, "for the service of the arsenals‡:" most frequently special instructions were given, that the officers at the head of the national library should have an unlimited power of selection, and of this they made extensive use§. The increase of the British Museum library, on the other hand, is mainly ascribable to *donation*. Of its 374,000 volumes, at least 180,000 have been presented or bequeathed||.

The average annual sum allotted to the support of the National Library at Paris is 16,575*l.*; to that of the Arsenal Library, 1,790*l.*;

\* See Vogel, *Historische Uebersicht der Verordnungen wegen Ablieferung von Pflichtexemplaren an öffentliche Bibliotheken in einigen Europäischen Staaten.* (Serapeum, 6r bd., 337—350.)

† Notice Historique sur la Bibliothèque Royale de Copenhague. Copenhagen, 1844. 8vo.

‡ See, for an example of this, Derheim's *Histoire de la ville de St. Omer.* (1843.) p. 638.

§ "The National Library," M. Champollion Figéac, one of its most distinguished officers, has somewhere said, "lost nothing under the domination of the *Vandals*, not even when it had an actor for its librarian."

|| See an Article in the *British Quarterly Review*, for August, 1847.

to that of St. Geneviève, 3,400*l.*; to that of the Mazarine, 1,790*l.*; (making for the four chief libraries of Paris 23,555*l.* yearly). The average annual sum allotted to the support of the Royal Library of Brussels is 2,700*l.*; to that of Munich, about 2,000*l.*; to that of Vienna, 1,900*l.*; to that of Berlin, 1,460*l.*; to that of Copenhagen, 1,250*l.*; to that of Dresden, 500*l.*; to that of the Grand Ducal Library of Darmstadt, 2,000*l.*

For a long period prior to the Report of the Select Committee of the House of Commons on the British Museum of 1835-36, the average annual expenditure for the library of the Museum was under 8,000*l.* a year, and of this sum only 1,135*l.*, on an average, were expended on the *purchase* of printed books. From 1837 to 1845 inclusive, the sum devoted to the last-named purpose was, on the average, 3,443*l.* Since 1846, 10,000*l.* a year has been thus appropriated by a special increase of the Parliamentary grant, urgent representations having been made to the Treasury of the great deficiencies existing in the collection of printed books. The entire annual sum at present allotted to the service of the library, in all its departments, is 26,552*l.*

The aggregate amount of the sums expended in the purchase of printed books, including maps and musical works, for the British Museum since its foundation in 1753, is 92,447*l.* 2*s.* 9*d.*, and that expended in the purchase of manuscripts, 40,850*l.* 11*s.* 10*d.*, together, 143,297*l.* 14*s.* 7*d.* The sums expended during the same period in prints and drawings amount to 28,109*l.* 19*s.* 10*d.*; in antiquities, coins, and medals, to 122,115*l.* 4*s.* 10*d.*; and in specimens of natural history, in all its branches, to 41,599*l.* 12*s.* 3*d.*

The present average number of volumes annually added to the National Library at Paris is stated to be 12,000; to that of Munich, 10,000; to that of Berlin, 5,000; to that of Vienna, 5,000; to that of Petersburg, 2,000; to the Ducal Library of Parma, 1,800; to the Royal Library of Copenhagen, 1,000. The average annual addition to the library of the British Museum is now (under the operation of the special grant,) about 30,000 volumes, usually comprising about 24,000 separate and complete works.

This increment is made up of three distinct items, *viz.*, purchases, donations, copyright-tax, the relative proportions of which may be estimated from the following tabular statement:—

In the Year	By Purchase. Separate Works.	By Donation. Separate Works.	By Copyright. Separate Works.	Expenditure.
				£
1841.....	3,140	236	2,409	3,000
1842.....	3,627	926	2,381	3,000
1843.....	4,856	250	2,816	4,000
1844.....	5,475	653	3,929	4,500
1845.....	7,630	881	3,596	4,500
1846.....	18,787	20,677*	1,073	8,909
Total.....	43,515	23,623	16,204	27,909

\* Including the splendid bequest of Mr. Thomas Grenville.

The principal UNIVERSITY LIBRARIES of Europe may be ranked as follows:—

1. GOETTINGEN, University Library .....	360,000	volumes.
2. BRESLAU, University Library .....	250,000	„
3. OXFORD, Bodleian Library .....	218,000	„
4. TUBINGEN, University Library .....	200,000	„
5. MUNICH, University Library .....	200,000	„
6. BOLOGNA, University Library .....	150,000	„
7. HEIDELBERG, University Library .....	150,000	„
8. CAMBRIDGE, Public Library .....	135,000	„
9. PRAGUE, University Library .....	130,000	„
10. DUBLIN, Trinity College Library .....	117,600	„
11. VIENNA, University Library .....	115,000	„
12. LEIPSIK, University Library .....	112,000	„
13. COPENHAGEN, University Library .....	110,000	„
14. TURIN, University Library .....	110,000	„
15. LOUVAIN, University Library .....	105,000	„
16. UPSAL, University Library .....	100,000	„
17. ERLANGEN, University Library .....	100,000	„
18. EDINBURGH, University Library .....	96,000	„

The University Library of Turin dates from 1436, that of Cambridge from 1484, that of Leipsic from 1544, that of Edinburgh from 1582, the Bodleian from 1597. The small library of the University of Salamanca is said to have been founded in 1215.

The Goettingen, Prague, Turin, and Upsal Libraries are *lending* libraries. Those of Goettingen, Oxford, Prague, Cambridge, Dublin, and Turin, are legally entitled to copies of all works published within the States to which they respectively belong.

The annual expenditure of the Tubingen Library is about 760*l.*, of the Goettingen Library 730*l.*, of the Breslau Library about 400*l.* That of the Bodleian, at Oxford, is now about 4,000*l.* With respect to this library there is more than usual difficulty in obtaining trustworthy data: its librarians would seem to take a peculiar pleasure in talking vaguely of its extent, as though its treasures were too vast to be estimated within twenty or thirty thousand volumes. I have therefore taken the pains to compile, from various privately printed reports and other documents, the following minute table of its accessions from 1826, at which period I believe it to have contained about 124,000 volumes, down to 1842:—

Year.	Volumes of Printed Books added.		Expenditure in Acquisitions.		Expenditure in Salaries.	Total Expenditure.		
	By Purchase.	By Donation.	1. Printed Books.	2. Manuscripts.				
			£ s. d.	£ s. d.	£	£	s.	d.
1826.....	1,208	87	1,384 12 6	82 2 0	820	3,016	1	8
1827.....	3,014	114	1,199 2 0	67 11 0	820	2,897	1	1
1828.....	1,586	51	1,319 10 0	415 7 0	820	4,460	18	0
1829.....	7,112	35	3,284 4 11	54 12 0	820	5,257	4	10
1830.....	1,380	104	1,067 6 0	....	820	2,633	17	0
1831.....	1,105	61	805 12 6	....	820	3,394	17	4
1832.....	1,191	67	978 15 0	105 0 0	820	2,927	17	5
1833.....	1,271	150	990 14 6	36 6 0	820	3,460	6	6
1834.....	2,337	12,110?	1,600 15 0	5 0 0	820	3,823	4	9
1835.....	1,775	87	1,251 7 6	215 5 0	820	4,182	14	8
1836.....	2,215	85	1,465 8 0	114 19 6	820	3,255	4	10
1837.....	3,105	131	1,469 16 6	55 2 0	820	3,223	7	11
1838.....	1,956	144	1,474 17 0	29 18 6	820	3,469	14	1
1839.....	1,648	60	1,053 17 6	21 0 0	820	3,461	16	1
1840.....	1,856	151	1,632 3 6	94 10 0	820	4,200	11	10
1841.....	1,695	75	1,579 13 6	21 16 0	820	3,623	0	9
1842.....	2,609	140	1,810 6 0	520 19 0	970	4,408	2	6
1843 to } 1846 }	37,063	13,652	24,368 2 0	1,839 8 0	14,090	61,696	1	3
	8,000?	400?	26,207 10 0					
	45,063	14,052						
Total....	59,115							

The number of volumes accruing to the Bodleian Library from the operation of the Copyright Act during these 21 years, computing them from the number supplied to the British Museum, would be about 35,000; so that the average annual increase of this library by purchase, donation, and tax, would be about 4,480 volumes a year.

In compiling the following Tables, I have relied primarily on official accounts, published or sanctioned by the officers of the respective libraries, whenever such accounts have been accessible to me; and, next to these, upon local histories or topographies, when any such have been recently published, and are of good repute.

In respect of French libraries, I am also greatly indebted to the valuable reports of Mr. Ravaisson on those of the Western departments, addressed to the Minister of Public Instruction; to the Memoir of Mr. Le Glay, on those of the Northern departments, published in the Transactions of the Academy of Lille; to various articles in the excellent periodical published by Mr. Techener, under the title *Bulletin du Bibliophile*; and to the elaborate table in Mr. Le Bas' *Dictionnaire Encyclopédique de la France*. This table, by no means free from error, but still very useful, has been translated, with some additions (which I have not omitted to examine), in Dr. Naumann's *Serapeum*; and has thence been transferred to Meyer's *Grosse Conversations-Lexicon*, now in course of publication, the article "Bibliothec-

ken" in which, is probably the best general view of the subject yet extant.

As respects German libraries I have made considerable use of the article, entitled *Verzeichniss der wichtigsten Bibliotheken Deutschlands*, in the *Bibliopolisches Jahrbuch* of 1841; of Dr. Petzholdt's *Anzeiger der Bibliothekswissenschaft*; of many valuable articles in the *Serapeum* above mentioned; and of the late Mr. Constantine Hesse's *Essai d'une Statistique des Bibliothèques dans l'Etranger*, published at Paris in 1840. This Essay appears to have been compiled with much research and discretion, and is singularly free from that manifest exaggeration of numbers, so observable in most works which treat of this subject. I have also consulted an article on some German libraries, contributed by Professor Adrien, of Giessen, to the *Statistical Journal* of April, 1841.

As respects Belgian libraries, I am much indebted to Mr. Voisin's *Documents pour servir à l'histoire des Bibliothèques en Belgique*, which I have occasionally compared with the *Histoire des Bibliothèques Publiques de la Belgique*, (Brussels, 1840,) by Mr. Namur.

As respects the libraries of Italy, I have consulted Mr. Serristori's *Statistica dell' Italia*, and Mr. Valery's very valuable and very amusing *Voyages historiques, artistiques, et littéraires*. On Spanish and Portuguese libraries I have found much information in Dr. Gustav Heine's *Bericht ueber seine litterarische Reise in Spanien*, published very lately in the *Serapeum*, and in the article by Mr. Wittich, entitled "*Bibliotheken Portugals*," in Zimmermann's *Zeitschrift fuer Alterthumswissenschaft*.

As respects Hungarian and Bohemian libraries, I am indebted to the *Neueste Beschreibung des Koenigreichs Ungarn*, and to the work of Mr. Hesse. As respects those of Russia, to various minute but ill-framed official reports published in the *Serapeum* at various and recent times; and as respects the libraries of Denmark and Sweden, chiefly to Mr. Hesse.

The statements respecting British and Irish libraries are made, either from personal knowledge or from the best answers I could obtain to careful inquiries.

Although attaching, as I said in the outset, great importance to the comparison of the extent of libraries, at different periods, as an indispensable element in any computation of their relative value, I have not been able to institute this comparison so often as I have wished to do. In many cases the necessary information appears to be quite unattainable.

The elaborate article by Ebert, in the *Cyclopædie* of Ersch and Grueber, is the first statistical view of existing libraries to be at all relied upon for general accuracy with which I am acquainted. It is now about a quarter of a century since that article was written. Next to this may perhaps be placed the valuable treatise of Mr. Balbi entitled *Essai Statistique sur les Bibliothèques de Vienne... comparées aux plus grands établissemens de ce genre*, &c. published in 1835.

In the following year the appointment of a Select Committee of the House of Commons, to inquire into the condition and manage-

ment of the British Museum, led to the collection, by our ambassadors and ministers abroad, of a variety of official returns and documents, illustrative of similar establishments in other countries, which were published in the Appendices to the Reports of that Committee in 1836 and 1837. And, in the last-named year, a series of twenty questions, on public libraries in particular, were drawn up by Mr. Panizzi, of the British Museum, and privately circulated in the principal cities of continental Europe. From the former source returns were obtained respecting 43 foreign libraries, and from the latter, answers to the questions so framed, respecting 36, of which number 11 had been unnoticed in the official returns. And, in some cases, the information obtained by Mr. Panizzi appeared to be more trustworthy than that procured through the official channels.

It is chiefly from a collation of the information thus collected that I have endeavoured, in respect of the larger European libraries, to show their numerical extent, some ten years ago, namely, about the year 1836, as contrasted with their extent, or presumed extent, in 1846. I cannot, in either case, hope that I have not committed some errors. Those, however, who are best acquainted with the difficulties which beset inquiries of this nature, will regard these errors with some indulgence, and for any information tending to their correction, I shall at all times be very thankful.

	Names of the Towns, the States to which they belong, and their Libraries.	Foundation of Library.	Population.	Number of Volumes of Printed Books.		Number of Volumes of MSS. 1846.
				In 1836.	In 1846.	
1	Aarau.—Switzerland .. .. .	..	3,100	..	60,000 <i>a</i>	..
	Cantonal Library .. .. .	..	..	..	..	..
2	Abbeville.—France .. .. .	..	13,842	..	..	..
	Town Library .. .. .	1685	..	10,000 <i>b</i>	13,000 <i>c</i>	..
3	Aberdeen.—Great Britain and Ireland .. .. .	..	61,778	..	..	..
	1. King's College Library .. .. .	..	..	18,000 <i>d</i>	20,000 ?	..
	2. Marischal College Library .. .. .	..	..	11,000 <i>d</i>	12,000 <i>e</i>	..
4	Abo (Finland).—Russian Empire .. .. .	..	13,000 ?	..	..	..
	University Library .. .. .	1649	..	..	20,000 <i>f</i>	..
5	Admont.—Austrian States .. .. .	..	..	..	..	..
	Library of Benedictine Monastery .. .. .	..	..	..	70,000 ?	..
6	Agen.—France .. .. .	..	12,851	..	..	..
	Town Library .. .. .	..	..	..	12,000 <i>c</i>	..
7	Aix.—France .. .. .	..	18,240	..	..	..
	Mejanes Public Library .. .. .	..	..	..	80,000 <i>c</i>	1,100
8	Aix-la-Chapelle.—Prussian States .. .. .	..	38,383	..	..	..
	Town Library .. .. .	..	..	..	10,000 <i>g</i>	..
9	Ajaccio.—France .. .. .	..	9,003	..	..	..
	Town Library .. .. .	..	..	..	140,000 ? <i>c</i>	..
10	Alby.—France .. .. .	..	9,367	..	..	..
	Town Library .. .. .	..	..	..	12,000 <i>c</i>	..
11	Alcobaga.—Spain .. .. .	..	1,716	..	..	..
	Library of Monastery of St. Bernard .. .. .	..	..	25,000	25,000 ? <i>h</i>	476
12	Alençon.—France .. .. .	..	13,277	..	..	..
	Town Library .. .. .	..	..	..	10,000 <i>i</i>	120
13	Alessandria.—Sardinia and Piedmont .. .. .	..	36,000	..	..	..
	Town Library .. .. .	..	..	15,000 <i>k</i>	15,000 ?	..
14	Altona.—Denmark .. .. .	..	26,400	..	..	..
	Gymnasium Library .. .. .	1727	..	..	10,000 <i>f</i>	..
15	Amiens.—France .. .. .	..	32,391	..	..	..
	Town Library .. .. .	1791	..	..	50,000 ? <i>k*</i>	570 ?

	Names of the Towns, the States to which they belong, and their Libraries.	Foundation of Library.	Population.	Number of Volumes of Printed Books.		Number of Volumes of MSS. 1846.
				In 1836.	In 1846.	
16	<i>Amsterdam</i> .—Holland .. .. .	..	207,000	..	16,000?	..
17	Public Library .. .. .	..	..	..	..	..
17	<i>Angers</i> .—France .. .. .	..	29,066	..	25,000 <i>l</i>	..
18	Town Library .. .. .	..	..	..	..	..
18	<i>Angoulême</i> .—France .. .. .	..	16,530	..	16,000 <i>c</i>	..
19	Town Library .. .. .	..	..	..	15,000 <i>f</i>	26
19	<i>Antwerp</i> .—Belgium .. .. .	..	75,362	..	10,000 <i>m</i>	..
20	Town Library .. .. .	..	10,000	..	48,000 <i>c</i>	1,000
20	<i>Arezzo</i> .—Tuscany .. .. .	..	23,485	..	22,000?	..
21	Town Library .. .. .	..	..	..	16,000?	..
21	<i>Arras</i> .—France .. .. .	..	7,000	..	24,000 <i>n</i>	..
22	Town Library .. .. .	..	..	..	30,000 <i>o</i>	200
22	<i>Aschaffenburg</i> .—Bavaria .. .. .	..	35,000	..	35,000 <i>p</i>	800
23	1. Royal Library .. .. .	1537	..	..	10,000 <i>i</i>	..
23	2. Lyceum Library .. .. .	..	..	..	..	..
24	<i>Augsburg</i> .—Bavaria .. .. .	..	10,989	..	61,000 <i>q</i>	2,600 <i>q</i>
24	Town Library .. .. .	..	..	..	20,000? <i>h</i>	..
25	<i>Auxerre</i> .—France .. .. .	..	27,773	..	15,000? <i>h</i>	..
26	Town Library .. .. .	..	..	..	10,000? <i>h</i>	..
26	<i>Calvet Museum Library</i> .. .. .	..	7,690	..	60,000 <i>f</i>	5,200
27	<i>Avanches</i> .—France .. .. .	..	..	..	25,000 <i>f</i>	..
27	Town Library .. .. .	..	..	..	14,000 <i>g</i>	..
28	<i>Bamberg</i> .—Bavaria .. .. .	1803	21,000	..	10,000 <i>c</i>	110
28	Town Library .. .. .	..	..	..	11,000?	..
28	<i>Barcelona</i> .—Spain .. .. .	..	120,000	..	45,000 <i>m</i>	..
29	1. Saint Dominic's Library .. .. .	..	..	320,000 <i>r</i>	47,000? <i>s</i>	5,000
29	2. Episcopal Library .. .. .	..	..	..	50,000? <i>s</i>	..
29	3. Marian Library .. .. .	..	..	..	..	..
30	<i>Basel</i> .—Switzerland .. .. .	..	24,321	..	50,000? <i>t</i>	1,200
30	Town Library .. .. .	1564	..	..	60,000 <i>c</i>	859
30	<i>Bayreuth</i> .—Bavaria .. .. .	..	14,000	..	21,000?	..
31	Chancery Library .. .. .	1736	..	10,000 <i>u</i>	10,500?	..
31	<i>Beaucaire</i> .—France .. .. .	..	9,600	..	20,000 <i>c</i>	12
32	Town Library .. .. .	..	..	..	150,000 <i>m</i>	400
32	<i>Beaune</i> .—France .. .. .	..	9,958	..	83,000 <i>m</i>	..
33	Town Library .. .. .	..	..	..	..	..
33	<i>Beauvais</i> .—France .. .. .	..	13,082	..	50,000 <i>f</i>	230
34	Town Library .. .. .	..	..	..	110,000 <i>c</i>	150
34	<i>Bergamo</i> .—Lombardy and Venice .. .. .	..	30,500	..	..	..
35	Town Library .. .. .	..	..	..	..	..
35	<i>Berlin</i> .—Prussian States .. .. .	..	290,797	..	..	..
36	1. Royal Library .. .. .	1650	..	320,000 <i>r</i>	47,000? <i>s</i>	5,000
36	2. University Library .. .. .	..	..	..	50,000? <i>s</i>	..
37	<i>Berne</i> .—Switzerland .. .. .	..	20,500	..	..	..
37	Town Library .. .. .	1550	..	35,000 <i>k</i>	50,000? <i>t</i>	1,200
38	<i>Besançon</i> .—France .. .. .	..	24,720	..	60,000 <i>c</i>	859
38	Town Library .. .. .	..	..	..	21,000?	..
38	? <i>Birmingham</i> .—Gt. Britain & Ireland .. .. .	..	190,000	..	10,500?	..
39	? 1. Public Library .. .. .	1779	..	20,000 <i>u</i>	20,000 <i>c</i>	12
39	? 2. New Public Library .. .. .	1796	..	10,000 <i>u</i>	150,000 <i>m</i>	400
40	<i>Blois</i> .—France .. .. .	..	11,123	..	83,000 <i>m</i>	..
40	Public Library .. .. .	..	..	..	..	..
41	<i>Bologna</i> .—States of the Church .. .. .	..	69,000	..	50,000 <i>f</i>	230
42	1. University Library .. .. .	1690	..	..	110,000 <i>c</i>	150
42	2. Magnani Library .. .. .	..	..	..	..	..
43	<i>Bonn</i> .—Prussian States .. .. .	..	13,000	..	..	..
44	University Library .. .. .	1818	..	..	..	..
45	<i>Bordeaux</i> .—France .. .. .	..	95,114	..	..	..
46	Town Library .. .. .	1738	..	..	..	..

	Names of the Towns, the States to which they belong, and their Libraries.	Foundation of Library.	Population.	Number of Volumes of Printed Books.		Number of Volumes of MSS. 1846.
				In 1836.	In 1846.	
43	<i>Boulogne</i> .—France .. .. .	..	25,732			
	Central Library .. .. .	..	..	..	21,000 <i>u*</i>	166
44	<i>Bourg</i> .—France .. .. .	..	8,818			
	Town Library .. .. .	..	..	..	17,000 <i>c</i>	..
45	<i>Bourges</i> .—France .. .. .	..	19,646			
	Town Library .. .. .	..	..	..	20,000 <i>c</i>	337
46	<i>Bremen</i> . .. .. .	..	42,000			
	1. Town Library .. .. .	1636	..	..	50,000 <i>t</i>	..
	2. Gymnasium Library .. .. .	1615	..	..	20,000 <i>t</i>	..
47	<i>Brescia</i> .—Lombardy and Venice .. .. .	..	35,000			
	Town Library .. .. .	..	..	..	28,000 <i>m</i>	..
48	<i>Breslau</i> .—Prussian States .. .. .	..	88,869			
	1. University Library .. .. .	1811	..	200,000 <i>w</i>	250,000 ?	2,300 ?
	2. Rehdiger Library .. .. .	1598	..	..	25,000 <i>t</i>	800
	3. Bernardine Library .. .. .	..	..	..	10,000 <i>f</i>	..
	4. St. Mary Magdalen Library .. .. .	..	..	..	20,000 <i>t</i>	..
49	<i>Brest</i> .—France .. .. .	..	29,773			
	Naval Library .. .. .	..	..	..	20,000 <i>c</i>	..
50	? <i>Bristol</i> .—Great Britain, &c. .. .. .	..	140,158			
	? Bristol Library .. .. .	1772	..	..	30,000 <i>g</i>	..
51	<i>Bruges</i> .—Belgium .. .. .	..	44,374			
	Town Library .. .. .	1797	..	..	10,000 <i>x</i>	626
52	<i>Brussels</i> .—Belgium .. .. .	..	134,000			
	1. Royal Library .. .. .	1839	..	..	133,500 <i>y</i>	18,000
	2. Parochial Library .. .. .	..	..	..	10,000 <i>x</i>	..
53	<i>Buda-Pesth</i> ( <i>Hungary</i> ).—Austrian Sts. .. .. .	..	106,000			
	1. University Library .. .. .	1792	..	265,000 <i>z</i>	50,000	..
	2. Szechenyi Library .. .. .	1802	..	18,000 <i>r</i>	18,000 ?	..
54	<i>Cacn</i> .—France .. .. .	..	39,886			
	Town Library .. .. .	1431	..	..	30,000	174
55	<i>Cagliari</i> .—Sardinia and Piedmont .. .. .	..	26,000			
	Town Library .. .. .	..	..	..	17,000 <i>f</i>	..
56	<i>Cahors</i> .—France .. .. .	..	10,944			
	Town Library .. .. .	..	..	..	12,000 <i>c</i>	..
57	<i>Cambray</i> .—France .. .. .	..	17,816			
	Communal Library .. .. .	1791	..	..	32,550 <i>aa</i>	1,246
58	<i>Cambridge</i> —Great Britain, &c. .. .. .	..	25,000			
	1. Public Library .. .. .	1484	..	100,000 <i>d</i>	135,000 ?	2,000
	2. Queen's College Library .. .. .	..	..	..	35,000 ?	..
	3. Trinity College Library .. .. .	..	..	..	30,000 ?	..
	4. Catharine Hall Library .. .. .	..	..	..	20,000 ?	..
	5. Christ's College Library .. .. .	..	..	..	10,000 ?	..
59	<i>Carcassone</i> .—France .. .. .	..	14,931			
	Town Library .. .. .	..	..	..	20,000 <i>c</i>	..
60	<i>Carlsruhe</i> .—Baden .. .. .	..	29,500			
	Grand-Ducal Library .. .. .	1756	..	..	80,000 <i>bb</i>	..
61	<i>Carpentras</i> .—France .. .. .	..	9,244			
	Town Library .. .. .	1745	..	..	25,000 <i>c</i>	800
62	<i>Cassel</i> .—Hesse .. .. .	..	31,000			
	Grand-Ducal Library .. .. .	1700	..	?85,000 <i>r</i>	70,000 <i>f</i>	400
63	<i>Catania</i> .—Naples and Sicily .. .. .	..	52,453			
	Town Library .. .. .	..	..	..	15,000 <i>cc</i>	..
64	<i>Chalons-sur-Marne</i> .—France .. .. .	..	12,930			
	Town Library .. .. .	1800	..	..	23,000 <i>c ee</i>	60
65	<i>Chalons-sur-Saone</i> .—France .. .. .	..	12,400			
	Town Library .. .. .	..	..	..	10,000 <i>c</i>	36
66	<i>Charkoff</i> —Russian Empire .. .. .	..	13,000			
	University Library .. .. .	..	..	..	30,000 <i>dd</i>	..
67	<i>Charleville</i> .—France .. .. .	..	8,878			
	Town Library .. .. .	..	..	..	22,000 <i>c</i>	200

	Names of the Towns, the States to which they belong, and their Libraries.	Foundation of Library.	Population.	Number of Volumes of Printed Books.		Number of Volumes of MSS. 1846.
				In 1836.	In 1846.	
68	<i>Chartres</i> .—France .. .. .	..	14,431	..	40,000 <i>c</i>	800
	Town Library .. .. .	..	..	..	..	..
69	<i>Chaumont</i> .—France .. .. .	..	6,113	..	35,000 <i>c</i>	47
	Town Library .. .. .	..	..	..	..	..
70	<i>Christiana</i> .—Sweden and Norway ..	..	23,121	..	50,000 <i>f</i>	..
	University Library .. .. .	1811	..	..	..	..
71	<i>Clermont-Ferrand</i> .—France .. .. .	..	32,427	..	10,000 <i>c</i>	150?
	Town Library .. .. .	..	..	..	..	..
72	<i>Coburg</i> .—Saxe-Coburg Gotha .. .. .	..	9,076	..	50,000 <i>f</i>	..
	Ducal Library .. .. .	1702	..	..	..	..
73	<i>Coimbra</i> .—Portugal .. .. .	..	20,000	..	38,000? <i>ff</i>	..
	University Library .. .. .	..	..	..	..	..
74	<i>Colmar</i> .—France .. .. .	..	13,867	..	36,000 <i>c</i>	149
	Town Library .. .. .	..	..	..	..	..
75	<i>Cologne</i> .—Prussian States .. .. .	..	66,179	..	63,000 <i>bb</i>	..
	1. Gymnasium Library .. .. .	..	..	..	17,000 <i>bb</i>	..
	2. Seminary Library .. .. .	..	..	..	15,000 <i>bb</i>	..
	3. Cathedral Library .. .. .	..	..	..	14,300 <i>bb</i>	521
	4. Wallraf's Library .. .. .	..	..	..	..	..
76	<i>Como</i> .—Lombardy and Venice .. .. .	..	15,600	..	10,000 <i>f</i>	..
	Town Library .. .. .	..	..	..	..	..
77	<i>Copenhagen</i> .—Denmark .. .. .	..	119,292	..	400,000 <i>k</i>	3,000
	1. Great Royal Library .. .. .	1550?	..	..	410,000 <i>gg</i>	..
	2. University Library .. .. .	1730?	..	..	110,000?	..
	3. Classen's Library .. .. .	..	..	..	35,000?	..
78	<i>Cordova</i> .—Spain .. .. .	..	40,750	..	11,000 <i>ff</i>	..
	Episcopal Library .. .. .	..	..	..	..	..
79	<i>Corunna</i> .—Spain .. .. .	..	22,500	..	17,300?	..
	University Library .. .. .	..	..	17,300 <i>k</i>	..	..
80	<i>Courtray</i> .—Belgium .. .. .	..	19,124	..	12,000 <i>x</i>	300
	Town Library .. .. .	..	..	..	..	..
81	<i>Cracow</i> .—Cracow .. .. .	..	37,000	..	12,000 <i>f</i>	4,300
	University Library .. .. .	..	..	..	..	..
82	<i>Dantzic</i> .—Prussian States .. .. .	..	56,257	..	30,000 <i>bb ii</i>	..
	Public Library .. .. .	1580	..	..	..	..
83	<i>Darmstadt</i> .—Hesse Darmstadt .. ..	..	23,000	..	150,000 <i>bb</i>	..
	Grand-Ducal Library .. .. .	1760	..	..	..	..
84	<i>Debreczin</i> ( <i>Hungary</i> ).—Austrian States	..	45,730	..	20,000 <i>z</i>	..
	Seminary Library .. .. .	..	..	..	..	..
85	<i>Dessau</i> .—Anhalt .. .. .	..	11,749	..	20,000 <i>bb</i>	..
	Ducal Public Library .. .. .	1819	..	..	..	..
86	<i>Dijon</i> .—France .. .. .	..	24,314	..	40,000 <i>c</i>	600
	Town Library .. .. .	..	..	..	..	..
87	<i>Dôle</i> .—France .. .. .	..	7,843	..	17,620 <i>ii*</i>	..
	Town Library .. .. .	1796?	..	..	..	..
88	<i>Dorpat</i> .—Russian Empire .. .. .	..	9,500	..	67,000? <i>dd</i>	..
	University Library .. .. .	..	..	..	..	..
89	<i>Donay</i> .—France .. .. .	..	18,890	..	30,000 <i>aa</i>	980
	Town Library .. .. .	..	..	..	..	..
90	<i>Dresden</i> .—Saxony .. .. .	..	69,500	..	300,000? <i>k</i>	2,800
	Royal Library .. .. .	1556	..	300,000? <i>k</i>	300,000? <i>s</i>	..
91	<i>Dublin</i> .—Great Britain and Ireland ..	..	238,531	..	117,600 <i>kk</i>	1,100
	1. Trinity College Library .. .. .	..	..	100,000? <i>d</i>	..	..
	2. Marsh's Library .. .. .	..	..	..	12,000?	..
	3. Dublin Society's Library .. .. .	1731	..	10,500 <i>kk*</i>	..	..
92	<i>Dusseldorf</i> .—Prussian States .. .. .	..	33,137	..	32,000 <i>bb</i>	..
	Town Library .. .. .	1770	..	..	..	..
93	<i>Edinburgh</i> .—Great Britain & Ireland ..	..	138,182	..	150,000 <i>d</i>	..
	1. Library of Faculty of Advocates ..	1682	..	..	96,000?	..
	2. University Library .. .. .	1582	..	..	50,000?	..
	3. Library of Writers to Signet .. .. .	..	..	..	..	..

	Names of the Towns, the States to which they belong, and their Libraries.	Foundation of Library.	Population.	Number of Volumes of Printed Books.		Number of Volumes of MSS. 1846.
				In 1836.	In 1846.	
94	<i>Einsiedeln</i> .—Switzerland .. .. .	..	7,000?			
	Town Library .. .. .	..	..	..	21,800 <i>ll</i>	840
95	<i>Epernay</i> .—France .. .. .	..	5,444			
	Town Library .. .. .	..	..	..	10,000 <i>c</i>	..
96	<i>Epinal</i> .—France .. .. .	..	8,742			
	Town Library .. .. .	..	..	..	17,000 <i>c</i>	..
97	<i>Erfurt</i> .—Prussia .. .. .	..	24,308			
	University Library .. .. .	1717	..	..	40,000 <i>bb</i>	1,000
98	<i>Erlangen</i> .—Bavaria .. .. .	..	8,800			
	University Library .. .. .	1743	..	..	100,000 <i>bb</i>	600?
99	<i>Escorial</i> .—Spain .. .. .	..	..			
	Royal Library .. .. .	1583	..	..	100,000? <i>t</i>	3,700
100	<i>Evora</i> .—Portugal .. .. .	..	12,000			
	Town Library .. .. .	..	..	..	40,000? <i>ff</i>	..
101	<i>Evreux</i> .—France .. .. .	..	7,852			
	Town Library .. .. .	..	..	..	10,000 <i>c</i>	..
102	<i>Ferrara</i> .—States of the Church .. ..	..	25,000			
	Town Library .. .. .	1546	..	..	80,000 <i>c</i>	900
	[Public since 1740.]					
103	<i>Flèche (La)</i> .—France .. .. .	..	5,833			
	Town Library .. .. .	..	..	..	20,000 <i>c</i>	..
104	<i>Florence</i> .—Tuscany .. .. .	..	97,548			
	1. Magliabecchian Library .. ..	1714	..	150,000 <i>k</i>	150,000 <i>m</i>	12,000
	[Public since 1747.]					
	2. Palatine Library .. .. .	..	..	70,000 <i>r</i>	80,000? <i>m</i>	..
	3. Marucellian Library .. .. .	..	..	50,000? <i>k</i>	15,000? <i>m</i>	..
	4. Riccardian Library .. .. .	1558	..	26,000? <i>k</i>	23,000? <i>m</i>	..
	[Public since 1811.]					
	5. Laurentian Library .. .. .	1444	..	..	..	9,000
	[Public since 1571.]					
	6. Library of the Fine Arts .. ..	..	..	11,000 <i>k</i>	11,000? <i>m</i>	..
105	<i>Fontainebleau</i> .—France .. .. .	..	9,000			
	National Library .. .. .	..	..	..	40,000 <i>mm</i>	..
106	<i>Franker</i> .—Holland .. .. .	..	3,900			
	University Library .. .. .	1590	..	12,200 <i>k</i>	13,000?	..
107	<i>Frankfort-on-Maine</i> .. .. .	..	66,244			
	Town Library .. .. .	1484	..	50,000 <i>k</i>	50,000?	..
108	<i>Fribourg</i> .—Baden .. .. .	..	12,200			
	University Library .. .. .	..	..	70,000 <i>nn</i>	70,000? <i>f</i>	..
109	<i>Fulda</i> .—Hesse .. .. .	..	10,000			
	Town Library .. .. .	1775	..	..	12,000 <i>f</i>	..
110	<i>Geneva</i> .—Switzerland .. .. .	..	28,000			
	Town Library .. .. .	1551	..	32,000 <i>oo</i>	46,000 <i>oo*</i>	200
111	<i>Genoa</i> .—Sardinia and Piedmont ..	..	97,621			
	1. University Library .. .. .	..	..	45,000 <i>pp</i>	45,000? <i>m</i>	1,000
	2. Berian Library .. .. .	..	..	..	15,000 <i>m</i>	1,500
	3. Franzonian Library .. .. .	..	..	..	30,000 <i>f</i>	..
	4. Library of Missionaries of St. Charles .. .. .	..	..	..	30,000 <i>f</i>	..
112	<i>Ghent</i> .—Belgium .. .. .	..	88,290			
	University Library .. .. .	1750?	..	..	51,600 <i>x</i>	556
113	<i>Giessen</i> .—Hesse Darmstadt .. ..	..	7,300			
	University Library .. .. .	1650	..	..	50,000	1,268
114	<i>Glasgow</i> .—Great Britain and Ireland ..	..	300,000			
	1. University Library .. .. .	..	..	30,000 <i>d</i>	50,000? <i>g</i>	..
	2. Hunterian Museum Library ..	..	..	..	12,000 <i>g</i>	..
115	<i>Goerlitz</i> .—Prussian States. .. ..	..	13,670			
	Gymnasium Library .. .. .	1727?	..	..	12,000 <i>bb</i>	300
116	<i>Goettingen</i> .—Hanover .. .. .	..	10,900			
	University Library .. .. .	1736	..	300,000 <i>k</i>	360,000? <i>qq</i>	5,000

	Names of the Towns, the States to which they belong, and their Libraries.	Population of Library.	Population.	Number of Volumes of Printed Books.		Number of Volumes of MSS. 1816.
				In 1836.	In 1816.	
117	<i>Gotha</i> .—Saxe-Coburg Gotha .. .. . Ducal Library .. .. .	1694	13,874	..	100,000? <i>bb</i>	5,000?
118	<i>Graetz</i> .—Austrian States .. .. . 1. University Library .. .. . 2. Johanneum Library .. .. .	1826	39,772	..	42,000 <i>rr</i> 31,000 <i>rr</i>	2,000 ..
119	<i>Greifswald</i> .—Prussian States .. .. . University Library .. .. .	1456	10,291	..	30,000 <i>bb</i>	..
120	<i>Grenoble</i> .—France .. .. . Town Library .. .. .	1771	26,000	..	50,000 <i>c</i>	1,200
121	<i>Guastalla</i> .—Parma .. .. . Town Library .. .. .	..	5,500?	..	12,000 <i>cc</i>	..
122	<i>Hague</i> .—Holland .. .. . Royal Library .. .. .	..	58,000	100,000 <i>k</i>	100,000?	..
123	<i>Halberstadt</i> .—Prussian States .. .. . Cathedral Gymnasium Library .. .. .	..	17,227	..	10,000 <i>bb</i>	220
124	<i>Halle</i> .—Prussian States .. .. . 1. University Library .. .. . 2. St. Mary's Church Library .. .. . 3. Orphan House Library .. .. .	1694 .. 1703	24,800	.. .. ..	50,000 <i>bb</i> 20,000 <i>bb</i> 25,000 <i>f</i>	.. .. ..
125	<i>Hamburg</i> .. .. . Town Library .. .. .	1529	128,000	..	160,000? <i>s</i>	5,000?
126	<i>Hanover</i> .—Hanover .. .. . Royal Library .. .. .	1660	24,000	70,000 "works"	80,000? <i>tt</i>	2,000
127	<i>Harre (Le)</i> .—France .. .. . Town Library .. .. .	..	25,168	..	14,000 <i>c</i>	..
128	<i>Heidelberg</i> .—Baden .. .. . University Library .. .. . [Public since 1787.]	1703	13,430	..	150,000 <i>uu</i>	2,000
129	<i>Hildburghausen</i> .—Hildburghausen .. .. . Ducal Library .. .. .	..	10,200	..	12,000 <i>t</i>	..
130	<i>Imola</i> .—States of the Church .. .. . University Library .. .. .	..	9,000	..	40,000 <i>m</i>	..
131	<i>Innsbruck</i> .—Austrian States .. .. . University Library .. .. .	..	10,738	..	40,000 <i>bb</i>	..
132	<i>Jena</i> .—Saxe-Weimar .. .. . University Library .. .. .	1548	5,817	..	60,000 <i>bb</i>	..
133	<i>Kasan</i> .—Russian Empire .. .. . University Library .. .. .	1804	57,000	..	30,000? <i>dd</i>	..
134	<i>Kief</i> .—Russian Empire .. .. . University Library .. .. .	..	26,000	..	45,000? <i>dd g</i>	..
135	<i>Kiel</i> .—Denmark .. .. . University Library .. .. .	1666	11,000	..	80,000 <i>t</i>	..
136	<i>Klagenfurt</i> .—Austrian States .. .. . Lyceum Library .. .. .	..	12,480	26,000 <i>xx</i>	40,000 <i>bb</i>	..
137	<i>Klosterneuburg</i> .—Austrian States .. .. . Chapter Library .. .. .	..	..	..	30,000 <i>f</i>	..
138	<i>Koenigsberg</i> .—Prussian States .. .. . University Library .. .. .	..	68,000	..	60,000 <i>t</i>	..
139	<i>Kremsminster</i> .—Austrian States .. .. . Benedictine Convent Library .. .. .	..	..	..	50,000 <i>bb</i>	..
140	<i>Langres</i> .—France .. .. . Town Library .. .. .	..	6,191	..	30,000 <i>c</i>	..
141	<i>Laon</i> .—France .. .. . Town Library .. .. .	..	7,826	..	20,000 <i>c</i>	171 <i>yy</i>
142	<i>Lauban</i> .—Prussian States .. .. . Town Library .. .. .	1596	5,640	..	15,000 <i>t</i>	..

	Names of the Towns, the States to which they belong, and their Libraries.	Foundation of Library.	Population.	Number of Volumes of Printed Books.		Number of Volumes of MSS. 1846.
				In 1836.	In 1846.	
143	<i>Lausanne</i> .—Switzerland .. .. .	..	14,126			
	University Library .. .. .	..	..	..	20,000 <i>t</i>	300
144	<i>Laybach</i> .—Austrian States .. .. .	..	13,079			
	Lyceum Library .. .. .	..	..	..	12,000 <i>t</i>	..
145	<i>Leipsic</i> .—Saxony .. .. .	..	17,514			
	1. University Library .. .. .	1511	..	110,000 <i>k</i>	112,000 ? <i>zz</i>	2,500
	2. Town Library .. .. .	1677	..	..	60,000 ? <i>bb</i>	2,000
146	<i>Lemberg</i> .—Austrian States .. .. .	..	51,965			
	University Library .. .. .	..	..	..	45,000 <i>t</i>	..
147	<i>Leyden</i> .—Holland .. .. .	..	36,110			
	University Library .. .. .	1586	..	70,000 <i>k</i>	70,000 ? <i>zz</i>	10,000 ?
148	<i>Liege</i> .—Belgium .. .. .	..	58,000			
	University Library .. .. .	1700 ?	..	..	56,000 <i>aaa</i>	437
	Seminary Library .. .. .	..	..	..	14,000 <i>x</i>	..
149	<i>Lille</i> .—France .. .. .	..	72,000			
	Town Library .. .. .	..	..	..	22,370 <i>aa bbb</i>	387
150	<i>Limoges</i> .—France .. .. .	..	23,963			
	Town Library .. .. .	..	..	..	12,000 <i>c</i>	..
151	<i>Lindau</i> .—Austrian States .. .. .	..	5,000			
	Town Library .. .. .	..	..	..	11,000 <i>t</i>	..
152	<i>Linköping</i> .—Sweden and Norway .. .. .	..	3,000 ?			
	Gymnasium Library .. .. .	..	..	..	10,000 <i>f</i>	..
153	<i>Lintz</i> .—Austrian States .. .. .	..	23,318			
	Lyceum Library .. .. .	..	..	..	22,000 <i>bb</i>	..
154	<i>Lisbon</i> .—Portugal .. .. .	..	250,000			
	National Library .. .. .	..	..	..	80,000 <i>ccc</i>	5,587
	St. Vincent's Seminary Library .. .. .	..	..	..	18,000 <i>ccc</i>	..
155	<i>London</i> .—Great Britain and Ireland .. .. .	..	2,000,000			
	1. British Museum Library .. .. .	1753	..	220,000	350,000 <i>ddd</i>	29,531 exclusive of 27,879 charters, rolls, &c.
	2. Sion College Library .. .. .	1631	..	20,000 ?	27,000 <i>ddd</i>	..
	3. Dr. Williams's Library .. .. .	1716	..	15,000 ?	17,000 <i>ddd</i>	..
	4. Archbishop Tenison's Library .. .. .	1684	..	3,000	3,000 <i>ddd</i>	..
156	<i>Louvain</i> .—Belgium .. .. .	..	21,342			
	University Library .. .. .	1639	..	..	105,000 <i>x</i>	216
	Jesuits' Library .. .. .	..	..	..	22,000 <i>x</i>	..
157	<i>Lubeck</i> .. .. .	..	26,000			
	Town Library .. .. .	1620	..	..	30,000 ? <i>bb</i>	100
158	<i>Lucca</i> .—Lucca .. .. .	..	24,092			
	Ducal Library .. .. .	..	..	..	25,000 <i>f</i>	..
159	<i>Lucerne</i> .—Switzerland .. .. .	..	7,000			
	Town Library .. .. .	..	..	..	30,000 <i>t</i>	500
160	<i>Lund</i> .—Sweden and Norway .. .. .	..	4,120			
	University Library .. .. .	..	..	40,000 ? <i>k</i>	60,000 ?	1,000
161	<i>Lüneburg</i> .—Hanover .. .. .	..	11,800			
	Seminary Library .. .. .	1555	..	..	14,000 <i>bb</i>	400
162	<i>Lyons</i> .—France .. .. .	..	200,000			
	Town Library .. .. .	1609	..	67,000 ?	70,000 <i>c</i>	1,518
163	<i>Macerata</i> .—States of the Church .. .. .	..	15,600			
	Town Library .. .. .	..	..	..	20,000 <i>cc</i>	..
164	<i>Macon</i> .—France .. .. .	..	11,941			
	Town Library .. .. .	..	..	..	10,000 <i>c</i>	..
165	<i>Madrid</i> .—Spain .. .. .	..	170,000			
	1. National Library .. .. .	1712	..	200,000 <i>k</i>	200,000 <i>ccc</i>	2,500
	2. St. Isidore's Library .. .. .	..	..	..	60,000 <i>g</i>	..
166	<i>Maфра</i> .—Portugal .. .. .	..	1,000			
	Conventual Library .. .. .	..	..	..	20,000 <i>ccc</i>	..
167	<i>Magdeburg</i> .—Prussian States .. .. .	..	51,347			
	Seminary Library .. .. .	..	..	..	12,000 <i>bb</i>	283

	Names of the Towns, the States to which they belong, and their Libraries.	Foundation of Library.	Population.	Number of Volumes of Printed Books.		Number of Volumes of MSS. 1846.
				In 1836.	In 1846.	
168	<i>Manchester</i> .—Great Britain & Ireland	..	360,000	..	19,000 <i>fff</i>	..
	Cheetham Library .. .. .	..	..	..	..	..
169	<i>Manheim</i> .—Baden .. .. .	..	20,600	..	20,000 <i>f</i>	..
	Lyceum Library .. .. .	..	..	..	..	..
170	<i>Mans (Le)</i> .—France .. .. .	..	19,103	..	45,000 <i>ggg</i>	700?
	1. Town Library .. .. .	..	..	..	15,000 <i>ggg</i>	..
	2. Seminary Library .. .. .	..	..	..	..	..
171	<i>Mantua</i> .—Lombardy and Venice .. ..	..	26,865	..	80,000 <i>m</i>	1,000
	Town Library .. .. .	..	..	..	..	..
172	<i>Marburg</i> .—Hesse .. .. .	..	7,700	..	55,000 <i>f</i>	..
	University Library .. .. .	1527	..	..	..	..
173	<i>Maros-Fasarhely</i> .—Austrian States ..	..	7,000	..	80,000	..
	Teleki Public Library .. .. .	..	..	..	..	..
174	<i>Marseilles</i> .—France .. .. .	..	170,000	..	50,000 <i>c</i>	1,230
	Town Library .. .. .	..	..	..	..	..
175	<i>Meaux</i> .—France .. .. .	..	7,774	..	14,000 <i>c</i>	..
	Town Library .. .. .	..	..	..	..	..
176	<i>Mechlin</i> .—Belgium .. .. .	..	22,896	..	30,000 <i>x</i>	100
	Seminary Library .. .. .	..	..	..	..	..
177	<i>Meiningen</i> .—Saxe Meiningen .. .. .	..	6,000	..	24,000 <i>f</i>	..
	Ducal Public Library .. .. .	1699	..	..	..	..
178	<i>Mélan</i> .—France .. .. .	..	6,830	..	10,000 <i>c</i>	..
	Town Library .. .. .	..	..	..	..	..
179	<i>Mentz</i> .—Hesse .. .. .	..	40,000	..	90,000 <i>bb</i>	..
	Town Library .. .. .	..	..	..	..	..
	[Public since 1800.]	..	..	..	..	..
180	<i>Metz</i> .—France .. .. .	..	42,793	..	30,000 <i>hhh</i>	900
	Town Library .. .. .	..	..	..	..	..
181	<i>Milan</i> .—Lombardy and Venice .. ..	..	171,268	..	170,000? <i>m</i>	1,000
	1. Brera Library .. .. .	1797?	..	200,000? <i>r</i>	60,000? <i>m</i>	10,000
	2. Ambrosian Library .. .. .	1604	..	100,000? <i>r</i>	..	..
182	<i>Modena</i> .—Modena .. .. .	..	27,000	..	90,000? <i>m</i>	3,000
	Este Library .. .. .	1700?	..	..	..	..
183	<i>Möckl</i> .—Austrian States .. .. .	..	..	..	16,000 <i>f</i>	1,500
	Benedictine Convent Library .. ..	..	..	..	..	..
184	<i>Mons</i> .—Belgium .. .. .	..	23,081	..	12,000 <i>x</i>	310
	Town Library .. .. .	1796	..	..	..	..
185	<i>Montauban</i> .—France .. .. .	..	17,531	..	10,500 <i>c</i>	..
	Town Library .. .. .	..	..	..	..	..
186	<i>Montbelliard</i> .—France .. .. .	..	4,000?	..	10,000 <i>c</i>	..
	Town Library .. .. .	..	..	..	..	..
187	<i>Montbrison</i> .—France .. .. .	..	6,020	..	15,000 <i>c</i>	..
	Town Library .. .. .	..	..	..	..	..
188	<i>Monte Cassino</i> .—Naples and Sicily ..	..	..	..	18,000 <i>f</i>	..
	Benedictine Convent Library .. ..	..	..	..	..	..
189	<i>Montpellier</i> .—France .. .. .	..	33,864	..	40,000 <i>c</i>	32
	1. Communal Library .. .. .	..	..	..	35,000 <i>c</i>	529
	2. Medical School Public Library ..	1767	..	..	25,000 <i>c</i>	..
	3. Fabre Museum Library .. .. .	..	..	..	..	..
190	<i>Moscow</i> .—Russian Empire .. .. .	..	384,562	..	60,000? <i>dd</i>	..
	University Library .. .. .	..	..	..	..	..
191	<i>Moulins</i> .—France .. .. .	..	15,231	..	20,000 <i>c</i>	20
	Town Library .. .. .	..	..	..	..	..
192	<i>Munich</i> .—Bavaria .. .. .	..	106,537	..	600,000 <i>iii</i>	..
	1. Royal Library .. .. .	1550	..	500,000 <i>r</i>	200,000 <i>iii</i>	2,000
	2. University Library .. .. .	..	..	200,000 <i>k</i>	..	..
193	<i>Münster</i> .—Prussian States .. .. .	..	19,763	..	70,000 <i>ekk</i>	..
	University Library .. .. .	..	..	..	..	..
194	<i>Murcia</i> .—Spain .. .. .	..	35,390?	..	10,000? <i>ffl</i>	..
	St. Philip's Library .. .. .	..	..	..	..	..
195	<i>Muri</i> .—Switzerland .. .. .	..	..	..	10,000 <i>t</i>	61
	Benedictine Convent Library .. ..	..	..	..	..	..

	Names of the Towns, the States to which they belong, and their Libraries.	Foundation of Library.	Population.	Number of Volumes of Printed Books.		Number of Volumes of MSS. 1846.
				In 1836.	In 1846.	
196	Namur.—Belgium .. .. .	1797	20,176	..	11,000 <i>x</i>	..
197	Nancy.—France .. .. .	1751	29,299	..	25,000 <i>c</i>	105
198	Nantes.—France .. .. .	1588	75,150	..	30,000 <i>l</i>	600
199	Naples.—Naples and Sicily .. .. .	1675	350,000	300,000? <i>k</i>	150,000 <i>m</i>	3,000
	1. Royal Bourbon Library .. .. .	..	..	10,000? <i>k</i>	50,000 <i>m</i>	..
	2. Brancaccian Library .. .. .	..	..	50,000? <i>k</i>	40,000 <i>f</i>	..
	3. University Library .. .. .	..	..	50,000? <i>k</i>	?	..
	4. St. Jerome's Convent Library .. .. .	..	..	..	..	..
200	Nemours.—France .. .. .	..	3,635	..	10,500 <i>c</i>	..
201	Neustrelitz.—Mecklenburg-Strelitz .. .. .	..	4,500	..	50,000 <i>bb</i>	..
202	Niort.—France .. .. .	..	18,015	..	20,000 <i>c</i>	..
203	Nismes.—France .. .. .	..	41,194	..	30,000 <i>c</i>	202
204	Novara.—Sardinia .. .. .	..	18,524	..	12,000 <i>m</i>	..
205	Nuremberg.—Bavaria .. .. .	1550?	40,000	..	36,000 <i>lll</i>	910
206	Oldenburgh.—Oldenburgh .. .. .	1792	5,564	..	60,000 <i>nonm</i>	..
207	Olmuetz.—Austrian States .. .. .	1786?	12,782	..	70,000 <i>f</i>	..
208	Oporto.—Portugal .. .. .	..	80,000	..	60,000 <i>ff</i>	2,000
209	Orleans.—France .. .. .	..	40,272	30,000? <i>r</i>	26,000 <i>c</i>	483
210	Ossek.—Austrian States .. .. .	..	..	..	10,000 <i>f</i>	..
211	Oxford.—Great Britain and Ireland .. .. .	1597	24,000	160,000? <i>d</i>	218,300? <i>nnn</i>	17,000?
	1. Bodleian Library .. .. .	..	..	..	50,000?	..
	2. All Souls College Library .. .. .	..	..	..	30,000?	..
	3. Christ Church College Library .. .. .	..	..	..	30,000?	..
	4. Radcliffe Library .. .. .	1714	..	..	?	..
	5. Ashmolean Library .. .. .	..	..	..	30,000?	..
	6. Queen's College Library .. .. .	..	..	..	18,000?	..
	7. Oriel College Library .. .. .	..	..	..	15,000?	..
	8. Wadham College Library .. .. .	..	..	..	10,000?	..
212	Padua.—Lombardy and Venice .. .. .	1629	45,000	50,000 <i>ooo</i>	70,000 <i>ppp</i>	..
	1. University Library .. .. .	..	..	..	55,000?	800
	2. Seminary Library .. .. .	..	..	..	52,000?	..
	3. Chapter Library .. .. .	..	..	..	..	..
213	Palermo.—Naples and Sicily .. .. .	1760?	110,000	..	40,000 <i>cc</i>	..
214	Palma (Majorca).—Spain .. .. .	..	34,343	..	20,000	..
215	Paris.—France .. .. .	1595	920,000	700,000 <i>k</i>	800,000 <i>qqq</i>	80,000
	1. National Library .. .. .	1781?	..	176,000 <i>k</i>	180,000 <i>qqq</i>	6,000
	[Public since 1737.] .. .. .	1624	..	160,000 <i>k</i>	150,000 <i>qqq rrr</i>	2,000
	2. Arsenal Library .. .. .	1661	..	90,000 <i>k</i>	100,000 <i>qqq</i>	4,000
	3. Saint Geneviève Library .. .. .	..	..	50,000 <i>k</i>	55,000 <i>qqq</i>	52
	[Public since 1790.] .. .. .	..	..	..	30,000 <i>qqq sss</i>	..
	4. Mazarine Library .. .. .	..	..	..	..	..
	[Public since 1688.] .. .. .	..	..	..	..	..
	5. Town Library .. .. .	..	..	..	..	..
	6. Natural History Museum Library .. .. .	..	..	..	..	..

	Names of the Towns, the States to which they belong, and their Libraries.	Foundation of Library.	Population.	Number of Volumes of Printed Books.		Number of Volumes of MSS. 1846.
				In 1836.	In 1846.	
216	<i>Parma</i> .— <i>Parma</i> .. .. . Ducal Library .. .. .	1760	36,000	82,000 <i>r</i>	100,000 <i>m</i>	4,000
217	<i>Patak (Hungary)</i> .— <i>Austrian States</i> .. Seminary Library .. .. .	..	..	..	20,000 ?	..
218	<i>Pau</i> .— <i>France</i> .. .. . Town Library .. .. .	..	11,959	..	15,000 <i>c</i>	..
219	<i>Paria</i> .— <i>Lombardy and Venice</i> .. .. University Library .. .. .	1771	23,531	..	50,000 <i>m</i>	..
220	<i>Perigueux</i> .— <i>France</i> .. .. . Town Library .. .. .	..	9,329	..	16,000 <i>c</i>	..
221	<i>Perpignan</i> .— <i>France</i> .. .. . Town Library .. .. .	..	16,733	..	15,000 <i>c</i>	82
222	<i>Perugia</i> .— <i>States of the Church</i> .. .. Town Library .. .. .	..	30,000 ?	..	30,000 <i>cc</i>	..
223	<i>Pesaro</i> .— <i>States of the Church</i> .. .. Town Library .. .. .	..	15,000 ?	..	15,000 <i>m</i>	..
	<i>Pesth</i> , see <i>Buda-Pesth</i> .					
224	<i>Petersburgh (St.)</i> .— <i>Russian Empire</i> .. 1. Imperial Library .. .. . [Public since 1814.] 2. University Library .. .. . 3. Rumainzow Museum Library .. ..	..	469,720	400,000 ? <i>k</i>	446,000 ? <i>dd</i>	20,650 ? .. 954
225	<i>Piacenza</i> .— <i>Parma</i> .. .. . Town Library .. .. .	..	30,000 ?	..	34,000 <i>cc</i>	..
226	<i>Pisa</i> .— <i>Tuscany</i> .. .. . University Library .. .. .	..	20,943	..	30,000 <i>m</i>	300
227	<i>Poitiers</i> .— <i>France</i> .. .. . Town Library .. .. .	..	22,000	..	25,000 <i>c</i>	80
228	<i>Posen (Poland)</i> .— <i>Prussian States</i> .. Raczynski Public Library .. ..	1832	32,456	..	22,000 <i>bb</i>	..
229	<i>Prague (Bohemia)</i> .— <i>Austrian States</i> .. University Library .. .. . Præmonstratensian Conv. Library ..	1777 ? 1665	107,358	90,000 <i>r</i>	130,000 <i>bb</i> 50,000 <i>bb</i>	4,000 1,000
230	<i>Presburgh (Hungary)</i> .— <i>Austrian St.</i> Appony Library .. .. .	..	37,380	..	?	..
231	<i>Rambervillers</i> .— <i>France</i> .. .. . Town Library .. .. .	..	5,000	..	10,000 <i>c</i>	..
232	<i>Ratisbon</i> .— <i>Bavaria</i> .. .. . Town Library .. .. .	1430	22,000	..	20,000 <i>bb</i>	..
233	<i>Ravenna</i> .— <i>States of the Church</i> .. .. Town Library .. .. .	1714	16,000	..	40,000 <i>m</i>	750
234	<i>Reggio</i> .— <i>Naples and Sicily</i> .. .. . Town Library .. .. .	..	8,000	..	50,000 <i>m</i>	..
235	<i>Rennes</i> .— <i>France</i> .. .. . Town Library .. .. .	..	29,909	..	35,000 <i>i</i>	220
236	<i>Revel (Esthonia)</i> .— <i>Russian Empire</i> .. Esthonian Public Library .. ..	1825	24,041	..	10,000 <i>ttt</i>	..
237	<i>Rheims</i> .— <i>France</i> .. .. . Town Library .. .. .	1806	38,359	..	30,000 <i>c</i>	1,500
238	<i>Rhodez</i> .— <i>France</i> .. .. . Town Library .. .. .	..	9,158	..	10,000 <i>c</i>	..
239	<i>Riga (Livonia)</i> .— <i>Russian Empire</i> .. Town Library .. .. .	..	60,000 ?	..	28,190 <i>uuu</i>	..
240	<i>Rimini</i> .— <i>States of the Church</i> .. .. Town Library .. .. .	1617	27,000	..	30,000 <i>m</i>	..
241	<i>Rochelle (La)</i> .— <i>France</i> .. .. . Town Library .. .. .	..	14,857	..	20,000 <i>c</i>	199
242	<i>Rome</i> .— <i>States of the Church</i> .. .. 1. Casuarie Library .. .. . 2. Vatican Library .. .. . 3. Angelica Library .. .. .	1700 ? 1465 ? 1605	.. .. ..	.. 90,000 ? <i>wicw</i> ..	120,000 <i>m</i> 100,000 <i>m</i> 85,000 <i>m</i>	4,500 24,000 2,945

	Names of the Towns, the States to which they belong, and their Libraries.	Foundation of Library.	Population.	Number of Volumes of Printed Books.		Number of Volumes of MSS. 1846.
				In 1836.	In 1846.	
	<i>Rome</i> —continued.					
	4. Barberini Library .. .. .	..	..	..	60,000 <i>m</i>	..
	5. Alexandrian Library .. .. .	..	..	..	50,000? <i>f</i>	..
	6. Roman College Library .. .. .	..	..	..	50,000? <i>f</i>	..
243	<i>Rostock</i> .—Mecklenburgh .. .. .	..	18,067	..	..	..
	University Library .. .. .	1569	..	..	43,000 <i>f</i>	..
244	<i>Rouen</i> .—France .. .. .	..	100,000?	..	..	..
	Town Library .. .. .	..	..	28 000 ?	48,000 <i>i</i>	1,300
245	<i>Rovigo</i> .—Lombardy and Venice .. .. .	..	5,669	..	..	..
	Silvester Library .. .. .	..	..	..	36,000? <i>g</i>	..
246	<i>Rudolstadt</i> .—Schwarzburg Rudolstadt .. .. .	..	4,000	..	..	..
	Town Library .. .. .	..	..	..	46,000 <i>t</i>	..
247	<i>Saint Andrews</i> .—Gt Britain & Ireland .. .. .	..	3,767	..	..	..
	University Library .. .. .	..	..	35,000 <i>d</i>	40,000 <i>xxx</i>	..
248	<i>Saint Brieuc</i> .—France .. .. .	..	11,382	..	..	..
	Town Library .. .. .	1793	..	16,000 <i>xxx*</i>	20,000 ?	91
249	<i>Saint Gall</i> .—Switzerland .. .. .	..	10,500	..	..	..
	1. Convent Library .. .. .	..	..	..	60,000 <i>t</i>	..
	2. Town Library .. .. .	..	..	..	17,500 <i>yyy</i>	1,530
250	<i>Saint Jago-de-Compostella</i> .—Spain .. .. .	..	12,000	..	..	..
	University Library .. .. .	..	..	..	10,000 ?	..
251	<i>Saint Omers</i> .—France .. .. .	..	18,789	..	..	..
	Town Library .. .. .	..	..	11,400? <i>zzz</i>	13,000 <i>aaaa</i>	812
252	<i>Saint Quentin</i> .—France .. .. .	..	19,892	..	..	..
	Town Library .. .. .	..	..	..	17,000 <i>c</i>	..
253	<i>Saint Ylie</i> .—France .. .. .	..	?	..	..	..
	Tinseau Public Library .. .. .	1760?	..	..	10,000	..
254	<i>Saintes</i> .—France .. .. .	..	7,823	..	..	..
	Town Library .. .. .	..	..	..	25,000 <i>c</i>	..
255	<i>Salamanca</i> .—Spain .. .. .	..	14,500	..	..	..
	University Library .. .. .	1215?	..	24,000 <i>k</i>	24,000?	..
256	<i>Salzburg</i> .—Austrian States .. .. .	..	12,000	..	..	..
	Benedictine Convent Library .. .. .	..	..	..	36,000 <i>f bb</i>	300
	Town Library .. .. .	1810	..	..	20,000 <i>f</i>	..
257	<i>Saumur</i> .—France .. .. .	..	11,576	..	..	..
	Town Library .. .. .	..	..	..	15,000 <i>c</i>	..
258	<i>Schaffhausen</i> .—Switzerland .. .. .	..	6,800	..	..	..
	Town Library .. .. .	..	..	..	30,000 <i>t</i>	..
259	<i>Sens</i> .—France .. .. .	..	9,029	..	..	..
	Town Library .. .. .	..	..	..	10,000 <i>bbbb</i>	..
260	<i>Seville</i> .—Spain .. .. .	..	91,360	..	..	..
	St. Acacio's Library .. .. .	1749	..	..	40,000? <i>ff</i>	250
	Columbian Library .. .. .	1560	..	..	18,000	700
261	<i>Sienna</i> .—Tuscany .. .. .	..	18,975	..	..	..
	Town Library .. .. .	1758	..	..	50,000 <i>cc</i>	5,500?
262	<i>Skara</i> .—Sweden and Norway .. .. .	..	1,590	..	..	..
	Gymnasium Library .. .. .	..	..	11,000 <i>k</i>	11,000?	..
263	<i>Soissons</i> .—France .. .. .	..	7,864	..	..	..
	Town Library .. .. .	1794?	..	26,750 <i>cccc</i>	29,155 <i>c</i>	212
264	<i>Solothurn</i> .—Switzerland .. .. .	..	4,200	..	..	..
	Council Library .. .. .	..	..	..	20,000 <i>t</i>	..
265	<i>Stockholm</i> .—Sweden and Norway .. .. .	..	83,885	..	..	..
	Royal Library .. .. .	..	..	70,000 <i>k</i>	70,000 ?	3,000
	Beuzelsjerna Library .. .. .	..	..	12,000 <i>k</i>	12,000 ?	..
266	<i>Strasbourg</i> .—France .. .. .	..	50,239	..	..	..
	Town Library .. .. .	1531	..	..	80,000 <i>c</i>	..
267	<i>Stuttgart</i> .—Wurtemberg .. .. .	..	38,500	..	..	..
	Royal Library .. .. .	1765	..	170,000 <i>dddd</i>	174,000 <i>f</i>	1,800

	Names of the Towns, the States to which they belong, and their Libraries.	Foundation of Library.	Population.	Number of Volumes of Printed Books.		Number of Volumes of MSS. 1846.
				In 1836.	In 1846.	
268	<i>Tibacens</i> .—Portugal .. .. .	..	..	..	20,000? <i>ccc</i>	..
	Benedictine Convent Library .. .. .	..	..	..	..	..
269	<i>Toledo</i> .—Spain .. .. .	..	15,000	..	?	..
	1. Cathedral Library .. .. .	1598	..	..	30,000? <i>ffff</i>	125
	2. Archiepiscopal Library .. .. .	1792	..	30,000 <i>r</i>	..	..
270	<i>Toulouse</i> .—France .. .. .	..	68,000	..	30,000 <i>c</i>	637
	1. Town Library .. .. .	..	..	..	30,000 <i>t</i>	..
	2. Royal College Library .. .. .	..	..	..	..	..
271	<i>Tournay</i> .—Belgium .. .. .	..	28,919	..	27,000 <i>x</i>	127
	Town Library .. .. .	..	..	..	..	..
272	<i>Tours</i> .—France .. .. .	..	26,669	..	35,000 <i>i</i>	1,000
	Town Library .. .. .	1812	..	..	..	..
273	<i>Treves</i> .—Prussian States .. .. .	..	14,941	..	90,000? <i>t</i>	..
	1. Town Library .. .. .	..	..	..	70,000 <i>bb</i>	..
	2. Gymnasium Library .. .. .	..	..	..	10,000 <i>bb</i>	..
274	<i>Trieste</i> .—Austrian States .. .. .	..	51,346	..	50,000 <i>c</i>	400
	Public Library .. .. .	..	..	..	200,000? <i>cccc</i>	1,900
275	<i>Troyes</i> .—France .. .. .	..	25,363	..	110,000 <i>gggg</i>	2,000
	Town Library .. .. .	..	..	90,000?	..	..
276	<i>Tubingen</i> .—Wurtemberg .. .. .	..	7,250	..	..	..
	University Library .. .. .	1562	..	..	..	..
277	<i>Turin</i> .—Sardinia and Piedmont .. .. .	..	106,000	..	..	..
	University Library .. .. .	1436	..	90,000?	..	..
	[Public since 1729.] .. .. .	..	..	..	..	..
278	<i>Ulm</i> .—Wurtemberg .. .. .	..	12,049	..	40,000 <i>t</i>	..
	Town Library .. .. .	..	..	..	..	..
279	<i>Upsal</i> .—Sweden and Norway .. .. .	..	4,500	..	100,000? <i>hhhh</i>	5,000
	University Library .. .. .	1621	..	100,000 <i>k</i>	..	..
280	<i>Utrecht</i> .—Holland .. .. .	..	44,000	27,000 "books" <i>k</i>	20,000?	..
	University Library .. .. .	..	..	..	..	..
281	<i>Valence</i> .—France .. .. .	..	9,390	..	15,000 <i>g</i>	..
	Town Library .. .. .	..	..	..	..	..
282	<i>Valencia</i> .—Spain .. .. .	..	65,840	..	50,000?	211
	Chapter? Library .. .. .	1750	..	50,000 <i>iii</i>	..	..
283	<i>Valenciennes</i> .—France .. .. .	..	16,679	..	13,000 <i>aa</i>	200
	Town Library .. .. .	1762	..	..	40,000? <i>f</i>	..
284	<i>Valetta</i> .—Malta (Great Britain) .. .. .	..	40,000?	..	..	..
	Town Library .. .. .	..	..	..	..	..
285	<i>Valladolid</i> .—Spain .. .. .	..	20,960	..	14,000? <i>h</i>	..
	1. Holy Cross Library? .. .. .	..	..	13,250 <i>k</i>	13,250?	300
	2. University Library .. .. .	..	..	..	..	..
286	<i>Valognes</i> .—France .. .. .	..	6,034	..	12,000 <i>i</i>	..
	Town Library .. .. .	..	..	..	..	..
287	<i>Venice</i> .—Lombardy and Venice .. .. .	..	97,156	..	70,000? <i>kkkk</i>	5,000
	1. Saint Mark's Library .. .. .	1468	..	86,000	20,000 <i>f</i>	..
	2. Seminary Library .. .. .	..	..	..	10,000 <i>f</i>	..
	3. Armenian Convent Library .. .. .	..	..	..	37,000? <i>f</i>	..
	4. Other Conventual Libraries .. .. .	..	..	..	..	..
288	<i>Vercelli</i> .—Sardinia and Piedmont .. .. .	..	18,353	..	12,000 <i>m</i>	..
	Agnesian Library .. .. .	..	..	..	..	..
289	<i>Verdun</i> .—France .. .. .	..	9,151	..	14,000 <i>g</i>	..
	Town Library .. .. .	..	..	..	10,000 <i>m</i>	..
290	<i>Verona</i> .—Lombardy and Venice .. .. .	..	48,486	..	..	..
	Town Library .. .. .	1802	..	..	..	..
291	<i>Versailles</i> .—France .. .. .	..	28,776	..	48,000 <i>lll</i>	..
	1. Town Library .. .. .	..	..	..	?	..
	2. Museum Library .. .. .	..	..	..	..	..

	Names of the Towns, the States to which they belong, and their Libraries	Foundation of Library.	Population.	Number of Volumes of Printed Books.		Number of Volumes of MSS. 1846.
				In 1836.	In 1846.	
292	<i>Vesoul</i> .—France .. .. .	..	5,792			
	Town Library .. .. .	..	..	..	23,000 <i>t</i>	..
293	<i>Vicenza</i> .—Lombardy and Venice .. .. .	..	20,688			
	Bertoliani Library .. .. .	..	..	..	36,000 <i>m</i>	200
294	<i>Vich</i> .—France .. .. .	..	12,500			
	Episcopal Library .. .. .	..	..	..	10,000 ?	..
295	<i>Vienna</i> .—Austrian States .. .. .	..	360,000			
	1. Imperial Library .. .. .	1440	..	300,000 <i>k</i>	313,000? <i>mmmm</i>	16,000
	[Public since 1575.]					
	2. University Library .. .. .	1777	..	100,000 <i>k</i>	115,000 <i>mmmm</i>	..
296	<i>Vienne</i> .—France .. .. .	..	14,000			
	Town Library .. .. .	..	..	..	14,000 ? <i>g</i>	..
297	<i>Vladimir</i> .—Russian Empire .. .. .	..	7,000			
	Seminary Library .. .. .	..	..	..	50,000 ? <i>dd</i>	.
298	<i>Volterra</i> .—Tuscany .. .. .	..	6,000			
	Town Library .. .. .	..	..	..	12,000 <i>m</i>	..
299	<i>Warsaw</i> .—Poland .. .. .	..	139,671			
	University Library .. .. .	..	..	..	?	..
300	<i>Weimar</i> .—Saxe Weimar .. .. .	..	11,212			
	Grand-Ducal Public Library .. .. .	1691	..	..	90,000 <i>f</i>	400
301	<i>Wernigerode</i> .—Prussian States .. .. .	..	5,340?			
	Stolberg Public Library .. .. .	1755	..	..	40,000 <i>bb</i>	..
302	<i>Westeras</i> .—Sweden and Norway .. .. .	..	312?			
	Gymnasium Library .. .. .	..	..	..	10,000 <i>f</i>	300
303	<i>Wiesbaden</i> .—Nassau .. .. .	..	15,000			
	Grand-Ducal Library .. .. .	..	..	..	40,000 <i>bb</i>	..
304	<i>Wilna</i> .—Poland .. .. .	..	..			
	University Library .. .. .	..	..	..	?	..
305	<i>Wolfenbützel</i> .—Brunswick .. .. .	..	8,500			
	Ducal Library .. .. .	1604	..	140,000 <i>r</i>	200,000 <i>s</i>	4,500 <i>f</i>
	[Public since 1667.]					
306	<i>Wurzburg</i> .—Bavaria .. .. .	..	22,500			
	University Library .. .. .	..	..	..	74,000 <i>nnnn</i>	900
307	<i>Zeitz</i> .—Prussian States .. .. .	..	10,000			
	Gymnasium Library .. .. .	1564	..	..	15,000 <i>f</i>	350
308	<i>Zittau</i> .—Saxony .. .. .	..	8,671			
	Town Senate Library .. .. .	1564?	..	..	12,000 <i>f oooo</i>	..
309	<i>Zurich</i> .—Switzerland .. .. .	..	11,536			
	Town Library .. .. .	1628	..	..	40,000 <i>f</i>	700
310	<i>Zwickau</i> .—Saxony .. .. .	..	7,239			
	Gymnasium Library .. .. .	1532	..	..	20,000 <i>bb</i>	200

## Summary.

	Name of State.	Population of State.	No. of Libraries exceeding 10,000 Volumes.	Aggregate Population of Cities containing Libraries.	Aggregate No. of Vols. in all the Libraries.	Average No. of Vols. in each Library.	No. of Vols. to every 100 of the Population of Cities containing Libraries.
1	Anhalt .....	146,233	1	11,749	20,000	....	170
2	Austrian States .....	36,950,401	41	1,381,331	2,193,000	53,488	159
3	Baden .....	1,335,200	4	66,730	320,000	80,000	480
4	Bavaria .....	4,407,721	11	339,837	1,178,000	107,091	347
5	Belgium .....	4,242,600	14	538,564	509,100	36,364	95
6	Bremen .....	42,000	1	42,000	70,000	....	167
7	Brunswick .....	269,000	1	8,500	200,000	....	2,353
8	Cracow .....	145,787	1	37,000	12,000	....	33
9	Denmark .....	2,194,950	5	156,692	645,000	129,000	412
10	France .....	34,213,929	107	3,183,120	3,975,695	37,156	125
11	Frankfort-on-Maine .....	66,244	1	66,244	50,000	....	75
12	{ Great Britain & Ire- } { land, including Malta }	28,000,000	29	3,524,416	1,542,400	53,186	43
13	Hamburg .....	128,000	1	128,000	160,000	....	125
14	Hanover .....	1,873,280	3	46,700	454,000	151,333	972
15	Hesse .....	812,510	4	88,700	227,000	56,750	256
16	Hesse Darmstadt .....	783,400	2	30,300	200,000	100,000	660
17	Hildburghausen .....	10,200	1	10,200	12,000	....	118
18	Holland .....	3,128,841	5	349,010	219,000	43,800	63
19	Lubeck .....	26,000	1	26,000	30,000	....	115
20	Lucca .....	168,193	1	24,092	25,000	....	104
21	Mecklenburgh .....	482,495	1	18,067	43,000	....	238
22	Mecklenburgh-Strelitz .....	89,528	1	4,500	50,000	....	1,111
23	Modena .....	403,000	1	27,000	90,000	....	333
24	Naples and Sicily .....	8,032,654	7	550,453	363,000	51,857	66
25	Nassau .....	387,570	1	15,000	40,000	....	267
26	Oldenburgh .....	265,570	1	5,564	60,000	....	1,078
27	Papal States .....	2,732,036	15	358,600	953,000	63,533	266
28	Parma .....	485,826	3	71,500	146,000	48,667	204
29	Portugal .....	3,412,500	7	363,000	276,000	39,429	76
30	Prussian States .....	14,992,738	30	884,405	1,637,300	54,577	196
31	Rudolstadt .....	4,000	1	4,000	46,000	....	1,150
32	Russian Empire .....	49,000,000	12	1,063,823	851,390	70,949	80
33	Sardinia and Piedmont .....	4,650,368	9	302,497	286,000	31,778	94
34	Saxe-Cobourg Gotha .....	140,050	2	22,950	150,000	75,000	551
35	Saxe-Meiningen .....	148,590	1	6,000	21,000	....	400
36	Saxe-Weimar .....	245,820	2	17,029	150,000	75,000	881
37	Saxony .....	7,665,590	5	132,927	504,000	100,800	379
38	Spain .....	12,168,774	17	650,359	687,550	40,441	166
39	Sweden and Norway .....	4,354,767	8	120,528	323,000	40,375	268
40	Switzerland .....	2,036,000	13	137,083	465,300	35,792	340
41	Tuscany .....	1,436,785	9	153,466	411,000	45,667	268
42	Wirttemberg .....	1,701,726	3	57,799	414,000	138,000	716
	Totals .....	....	383	15,025,735	20,012,735		

Lombardy and Venice, *see* Austrian States.Poland, *see* Russian Empire.Schwarzburg Rudolstadt, *see* Rudolstadt.States of the Church, *see* Papal States.

*Authorities.*

- a. See Kurz and Weissenbach, Beiträge zur Geschichte, &c., (1846, pp. 107, sqq.,) quoted in Naumann's Serapeum, Jahrgang vii., p. 287. Sept. 1846.
- b. See Lonandre, Histoire d'Abbeville, p. 584.
- c. See Le Bas, Dictionnaire Encyclopédique de la France, tome ii., pp. 529, sqq. Compare the translation, with notes and additions, in Serapeum, Bd. iv., pp. 332-348.
- d. See Dr. Brown, art. Libraries, in Encyclopædia Britannica, 7th Edit., xiii., 298, sqq.
- e. See Statistical Account of Scotland, xii., 1184.
- f. See L. A. Constantin (Hesse), Essai d'une Statistique des Bibliothèques Publiques dans l'Etranger.
- g. See McCulloch, Dictionary Geographical, Statistical, &c. (New Edition, 1846.)
- h. See Haenel, Catalogi Librorum MSS. qui in Bibl. Gallie.....asservantur. (Lipsiæ, 1830., fol.)
- i. See Ravaisson, Rapports au Ministre de l'Instruction Publique sur les Bibliothèques des Départements de l'Ouest.
- k. See Communications received from H. M. Ministers abroad, respecting Libraries in Foreign Countries; in the Appendix to the Reports from the Select Committee on the British Museum, 1835, 1836, (Commons' Sess. Papers, 457, 325).
- k\*. See Garnier, Catalogue des MSS. de la Bibliothèque Communale de la ville d'Amiens. (1843), p. i.
- l. See Ravaisson, ut supra. Comp. Beauregard, Statistique du Département de Maine et Loire, (1842) p. 128.
- m. See Valery, Voyages Historiques, Littéraires, et Artistiques en Italie. 2me édition.
- n. See Metzger, Geschichte der Kreis und Stadtbibliothek zu Augsburg (1812). Comp. Constantin (Hesse), ut supra.
- o. See Bulletin du Bibliophile, May, 1845, p. 184. "Une collection où sont réunis une foule d'ouvrages qu'il faudrait payer au poids de l'or."
- p. Ibid. August, 1845, p. 355.
- q. See Jaek (its Librarian), in Serapeum. iii., 96.
- r. See Panizzi, Information on Foreign Public Libraries of Printed Books, printed in App. to Report, ut supra., 1836, pp. 542-564. Comp. Communications, &c., ut supra.
- s. See Anzeiger der Bibliothekswissenschaft, Jahrgang 1845. Herausg. von J. Petzholdt. Comp. Meyer, Das grosse Conversations lexicon (1846), art. Bibliotheken.
- t. See Meyer, ubi supra.
- u. See Hutton, History of Birmingham, 6th edition (1835), p. 491.
- u\*. Comp. Vitet, Rapport sur les Bibliothèques, les Archives, et les Musées des Départements de l'Oise, &c., &c. (1831), p. 93.
- w. See Wachler, Handbuch der Geschichte der Literatur, 3e Umarb. iii., 91.
- x. See Voisin, Documents pour servir à l'Histoire des Bibliothèques en Belgique. Comp. Namur, Histoire des Bibliothèques en Belgique.
- y. See De Reiffenberg, Annuaire de la Bibliothèque Royale de Bruxelles. Années 1842-1845.
- z. See Neueste Beschreibung des Königreichs Ungarn, &c.
- aa. See Demeunynck and Devaux, Annuaire Statistique du Département du Nord, (1846) pp. 123, 124. Comp. Le Glay, Mémoire sur les Bibliothèques Publiques du Nord, (1839).
- bb. See Bibliopolisches Jahrbuch für 1841.
- cc. See Serristori, Statistica dell' Italia, 2da ediz. (Dec., 1842.)
- dd. See Russian official reports, in Serapeum, i. 72; ii. 140; viii. 252; (August, 1847).
- ee. See Chalette, Précis de la Statistique du Département de la Marne, (1845) i. 365.

- ff.* See Heine, *Berichte über seine litterarische Reise in Spanien*, in *Serapeum*, vii. 193-200 (1846); and viii. 81-95 (1847).
- gg.* See Werlauff, *Historiske Efterretninger om det store kongelige Bibliothek*, &c. (2nd edition), pp. 338, sqq. Comp. Constantin (Hesse), *ut supr.*
- hh.* See Waitz, in *Archiv der Gesellschaft für ältere deutsche Geschichtskunde*, viii. 255.
- ii.* Comp. Klemm, *Zur Geschichte der Sammlungen für Wissenschaft in Deutschland*, (1837).
- ii\*.* See Marquiset, *Statistique de Dôle*, i. 252.
- kk.* See *History of the University of Dublin*, by W. B. S. Taylor (1845), pp. 311, 312.
- kk\*.* See *Report from Select Committee on Royal Dublin Society* (1836), p. 352, § 3490.
- ll.* See *Serapeum*, iii., 351, 352.
- mm.* Known, under Napoleon, as the *Bibliothèque du Conseil d'Etat*, after the fall of the Empire, removed to Fontainebleau, and since enlarged. There is an excellent Catalogue of it, before its removal, by Barbier, then its librarian, some of whose correspondence in that capacity with the Emperor has been recently published in the *Bulletin du Bibliophile*. This correspondence possesses great interest, and contains new illustrations of the marvellous comprehensiveness and vigour of Napoleon's intellect, as well as curious indications of his literary sympathies and tastes.
- nn.* See Ebert, art. *Bibliotheken*, in the *Encyclopædia of Ersch and Grueber*.
- oo.* See Aymar Bression, *Statistique generale de Genève*, in the *Journal de la Société Française de Statistique Universelle*, xiv., 307.
- oo\*.* From an unpublished Report of the Librarian, Prof. Chastel, for which I am indebted to the courtesy of Mr. Thos. Harvey.
- pp.* See *Sardinian Calendar of 1836*.
- qq.* See *Serapeum*, vi. 384. Comp. Klemm, *ut supr.*, and Petzholdt's *Anzeiger* for 1845.
- rr.* See Schreiner, Grätz, ein statistisch-topographisches Gemälde (1843), 431, 443.
- ss.* Comp. Laborde, *Etude sur la construction des Bibliothèques* (1846).
- tt.* See Von Reden, *Das Königreich Hannover statistisch beschrieben*, ii., 4, 63.
- un.* See *Serapeum*, ii., 15; vi., 383. Comp. Meyer, *ut supr.*
- xv.* See Hermann, *Klagenfurt wie es war und ist*.
- yy.* Comp. Haenel, *ut supr.*
- zz.* Comp. Constantin (Hesse), *ut supr.*
- aaa.* See *Serapeum*, v., 307.
- bbb.* Comp. Demeunynck, &c., *ut supr.*
- ccc.* See Wittich, *Bibliotheken Portugals*, in *Zimmermann's Zeitschrift für Alterthumswissenschaft* (1840), pp. 721, sqq.
- ddd.* See the article *Public Libraries in London and Paris*, in the *British Quarterly Review*, vi., 113.
- eee.* "This library is very well conducted. It is rich in Spanish literature, especially theology and topography, and has been much increased numerically, since the suppression of the convents; but good modern books are needed."—Ford, *Handbook of Spain*, 784, 785.
- fff.* MS. Comm. from Mr. Jones, its librarian, for which I am indebted to the kindness of my friend, Francis Espinasse, Esq.
- ggg.* See Teichner, *Bibliothèques en province*, in *Bulletin du Bibliophile*, 984 (Oct. 1846).
- hhh.* See Verronais, *Statistique du Département de la Moselle* (1844), 275.
- iii.* Comp. Schiller, *München, dessen Kunstschatze*, &c. 2e Aufl., 112; and De Reiffenberg, *Pélerinage à Munich* (1843). The latter states that the computation of the librarian, Mr. Liehtenthaler, is 800,000 volumes, but he adds, with great reason, "this appears to be an exaggeration." But, at all events, this magnificent collection must be placed in the first rank of European libraries, as little inferior even to that of Paris. Having been formed by the aggregation of many separate libraries, it includes, of course, a great number of *duplicates*. It has recently

been lodged in the noble building erected for it from the designs of the late Bavarian architect Gaertner.

kkk. See Adrien of Giessen, in *Journal of Statistical Society of London*, iv. 66, sqq. (1841.)

lll. See De Reiffenberg, *Pelérinage*, &c., ut *supr*.

mmm. See Merzdorff, *Bibliographische Unterhaltungen* (1844), 69.

ooo. See *Bolletino Statistico di Milano* (1833).

ppp. Comp. Coup d'œil sur quelques Bibliothèques de l'Italie, in the *Bulletin du Bibliophile*, Feb. 1839, p. 540.

qqq. See *Public Libraries in London and Paris*, ubi *supra*. A recent number of Didot's *Encyclopédie Moderne* states the contents of the Bibliothèque Royale to be as follows:—"More than 900,000 printed volumes; 80,000 MS. volumes; and several hundreds of thousands of historical pieces, in cartons." (Tome vi., p. 162. 1847.)

rrr. See De Bougy, *Histoire de la Bibliothèque Sainte Geneviève*, 149, (1847).

sss. See De La Borde, *Essai sur la construction des Bibliothèques*, 29, (1846).

ttt. See Possart, *Statistique des Gouvernements Esthland*, (1846).

uuu. See *Das Inland*, 1845, 205, sqq. (Dorpat.)

www. See Rampoldi, *Corografia dell' Italia* (1833). At the same period Ebert assigned this library 30,000 volumes, and Valery 80,000.

xxv. See Lyon, *History of St. Andrews*, ii. 189. This library has now 630l. a year from the Consolidated Fund, in lieu of its former share of the Copyright Tax. It is open to the inhabitants, generally, of St. Andrews, under proper regulations.

xxx\*. See *Annuaire des Côtes du Nord* (1838), p. 109.

yyy. See Weidmann, *Geschichte der Bibliothek von St. Gallen*.

zzz. "12,098 vols. including MSS."—Piers, *Notice Historique sur la Bibliothèque Publique de Ste. Omer*.

aaaa. See Derheims, *Histoire de la ville de Ste. Omer*, 648, (1843).

bbbb. See Techener, in *Bulletin du Bibliophile*, May, 1845, 183.

cccc. See Leroux, *Histoire de la ville de Soissons*, 479, (1839).

dddd. See Bailly, in *Journal de la Société Française de Statistique Universelle*.

eeee. See Keller, in *Serapeum*, i., 124.

ffff. See Knust, in *Archiv.*, &c., ut *supr.*, viii., 244.

gggg. See Vallauri, *Storia delle Università degli studi del Piemonte*, iii., 138, (1846).

hhhh. See Baird, *Visit to Northern Europe*, ii., 244.

iiii. See De La Borde, *Itinéraire*, ii., 293.

kkkk. Comp. Le Comte, *Venice*; Coup d'œil littéraire, &c.; and Valery, ut *supr.*, ii., 317.

lll. See *Bulletin du Bibliophile*, Feb. 1839, 540.

mmmm. See *Serapeum*, Nov. 1846, vii., 336. Comp. Pezzl, *Beschreibung von Wien*, 8th edition, 266.

nnnn. See *Serapeum*, 1845, vi., 179.

oooo. Comp. Klemm, ut *supr*.

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### *Public Libraries in the United States of America.*

THERE is less difficulty in ascertaining the number and extent of the Public Libraries in the United States of America, than in most of the countries of Europe. And the comparatively recent date of their origin, with other circumstances, make it desirable to take a lower scale, in point of magnitude, than has been taken in respect of European libraries. The following table, therefore, includes, or is believed to include, all those which contain 5,000 volumes or upwards.

It also appears, on information which I believe to be trustworthy, that many libraries which are, strictly speaking, the private property of associations and corporate bodies, are, in practice, really

and essentially *public*, in respect to their use and enjoyment, and ought, therefore, to be included in this enumeration.

Regard being had to the peculiar circumstances which have attended the growth and development of "The United States," a glance at the accompanying table will evince that Americans have reason to be proud of the extent of their establishments in this kind, for public advantage, and especially in furtherance of popular education.

There are in the States at least 81 libraries, each of 5,000 volumes and upwards, to which the public, more or less restrictedly, have access, and of these, 49 are immediately connected with colleges or public schools.

The aggregate number of volumes in these libraries is about 955,000; 200,000 of which are in the State of Massachusetts, 159,000 in the State of Pennsylvania, 158,000 in the State of New York, 81,000 in the State of Connecticut, 53,000 in the District of Columbia, 41,000 in the State of Virginia, 38,000 in the State of Maine, 37,000 in the State of Rhode Island, 30,000 in the State of Ohio, 30,000 in the State of South Carolina, 28,000 in the State of New Jersey, 22,000 in the state of New Hampshire.

The number of volumes thus provided in these States respectively, excluding from notice those contained in libraries under 5,000 volumes, is in Rhode Island about 34 to every 100 of the population, in Massachusetts about 27, in Connecticut 26, in Pennsylvania 9, in New Jersey 7, in New Hampshire 7, in Maine 7, in New York 6, in South Carolina 5, in the District of Columbia, containing the capital of the Union, it is 121.

The city of Boston possesses about 73 volumes to every 100 of its inhabitants, Richmond, the capital of Virginia, 59, Philadelphia 53, New York 35, Washington 119.

The library of oldest foundation, and also of greatest extent, in the United States, is that of Harvard University, which dates from 1638. In that year John Harvard, the founder of the University, gave his collection of some 260 volumes, chiefly venerable folios, as the nucleus of a library "for public use and advantage." In 1763 it already contained 5,000 volumes, including the fine oriental library of Lightfoot; but in the following year unhappily it was totally destroyed by fire. A subscription was immediately set on foot for its restoration, to which a munificent Englishman, Thomas Hollis, largely contributed, both in money and in books. In 1838, just two centuries after its foundation, Gore Hall, now the handsomest structure in the University, was built for the reception of the library, which had then grown to above 50,000 volumes\*. Its present number, including the "Society libraries" of the students, is stated at 68,500.

The library of Yale College was founded in 1700; in 1831 it contained 10,000 volumes, it is now stated to contain 34,500 volumes, including the libraries of the "Linonian" and "Calliopean" Societies.

The "Library Company" of Philadelphia was established mainly by the instrumentality of Franklin in 1731, and incorporated in

\* "Quincy, History of Harvard University," vol. i. pp. 10, 11, &c.; ii. 113, 749, &c.

1742. In 1785, it contained 5,847 volumes; in 1807, 14,457; in 1835, 35,221\*.

In 1751 James Logan of Philadelphia, the friend of Franklin, bequeathed to public use a library of 2,000 volumes, with a house and 30*l.* per annum to maintain it. This library was greatly increased by his son and his brother. In 1792 it contained nearly 4,000 volumes, and in that year, by an act of the Legislature of Pennsylvania, it was annexed to the collection of the "Library Company" of Philadelphia†, and the united library, now comprising 55,000 volumes, valuable and well selected, is "open to every respectable person for reading or consultation every day‡."

The "Boston Library Society" was founded in 1792, and incorporated in 1794. It now contains about 11,000 volumes, which have been obtained chiefly by purchase.

The library of the "American Antiquarian Society" at Worcester, grew out of the gift of about 8,000 volumes by Isaiah Thomas, the founder of the society, and the learned annalist of printing in America. It is particularly rich in American history, and contains many valuable MSS.§; its present number of volumes exceeds 13,000. This Society has very recently made an extensive and valuable donation of its duplicate books and pamphlets to the library of the British Museum.

The library of the New York Theological Seminary is chiefly composed of the rich theological library of the Rev. Leander Van Ess||. "Columbia College," in New York, and the "New York Library Society," were both established in 1754, and the "Historical Society" in 1804¶. In 1839 the "Mercantile Library" of New York contained 18,000 volumes\*\*, it now contains about 25,000.

The remarkable bequest by Mr. Smithson, a wealthy Englishman, of a considerable property to the President and Congress of the United States of America, in trust for "the diffusion and advancement of knowledge amongst men," will, it is probable, eventually lead to the formation of a larger and more comprehensive public library than yet exists within the States, unless indeed the efforts of those who may conduct the "Smithsonian Institution," should be enfeebled by the attempt to occupy too wide a field of exertion at the outset. Already, in addition to a great library, they talk of forming a museum, a chemical laboratory, and an establishment of public lectures; of giving prizes for essays in various departments of literature and science, and of publishing "Transactions" and elementary treatises. And it is much to be doubted, whether the method indicated in the follow-

\* Catalogue of the books of the Library Company of Philadelphia, (1836), p. 10.

† Catalogue of the Loganian Library, (1837), pp. 6. 7.

‡ American Facts, &c. By G. P. Putman, (1845), p. 65.

§ Catalogue of the Library of the American Antiquarian Society, (1837), p. 7.

|| Gazetteer of New York, (1842), p. 277.

¶ Haskel and Smith, Gazetteer of the United States, (1844).

\*\* An Address delivered before the Mercantile Library Association, by J. H. Gourlie, (1839), p. 8.

ing paragraph of an official report, be either a wise or practicable plan for the formation of a useful library.—“It may be easy, and your Committee think desirable, for those who may be charged with the selection of books, to make the Smithsonian library chiefly a *supplemental* one; to purchase, for the most part, valuable works which are not to be found elsewhere in the Union\*.”

In constructing the following Table, I have derived much assistance from a series of articles in the *Serapeum* of 1846; from a list of Colleges, &c. in the *American Almanack* for the same year; from the valuable work of Mr. Shattuck on the Statistics of Boston; and from private information obligingly communicated by Mr. J. Stevens, and others. For any further information, tending to correct errors or supply defects, I shall at any time be very grateful.

\* Report of the Organization Committee of the Smithsonian Institution, (1847), page 17.

	Names of the Towns, the States to which they belong, and their Libraries.	Population.	When Founded.	Volumes of Printed Books. In 1846.	No. of Volumes to every 100 of the Population
1	<i>Albany</i> .—New York .. .. .	33,721	..	..	35·6
	New York State Library .. .. .	..	..	12,000 <i>a</i>	
2	<i>Alleghany</i> .—Pennsylvania .. .. .	10,089	..	..	59·5
	Western Theological Seminary Library .. .. .	..	..	6,000 <i>b</i>	
3	<i>Amherst</i> .—Massachusetts .. .. .	2,550	..	..	588·2
	Amherst College Library .. .. .	..	..	15,000 <i>b</i>	
4	<i>Andover</i> .—Massachusetts .. .. .	5,207	..	..	345·7
	Theological Seminary Library .. .. .	..	..	18,000 <i>b</i>	
5	<i>Athens</i> .—Georgia .. .. .	1,200	..	..	1083·3
	Franklin College Library .. .. .	..	..	13,000 <i>b</i>	
6	<i>Auburn</i> .—New York .. .. .	5,626	..	..	88·9
	Theological Seminary Library .. .. .	..	..	5,000 <i>b</i>	
7	<i>Bairdstown</i> .—Kentucky .. .. .	1,942	..	..	360·4
	St. Joseph's College Library .. .. .	..	..	7,000 <i>b</i>	
8	<i>Baltimore</i> .—Maryland .. .. .	102,313	..	..	11·7
	St. Mary's College Library .. .. .	..	..	12,000 <i>b</i>	
9	<i>Bangor</i> .—Maine .. .. .	8,627	..	..	81·1
	Theological Seminary Library .. .. .	..	..	7,000 <i>b</i>	
10	<i>Boston</i> .—Massachusetts .. .. .	93,383	..	..	73·6
	1. Boston Athenaeum Library .. .. .	..	..	35,000 <i>c</i>	
	2. Boston Society Library .. .. .	..	1792	11,000 <i>c</i>	
	3. Library of Massachusetts' Historical Society .. .. .	..	..	6,000 <i>c</i>	
	4. American Library .. .. .	..	..	6,000 <i>c</i>	
	5. Massachusetts' State Library .. .. .	..	..	5,757 <i>c</i>	
	6. Boston Mercantile Library .. .. .	..	..	5,000 <i>c</i>	
11	<i>Brinquen</i> .—Louisiana .. .. .	..	..	..	
	Jefferson College Library .. .. .	..	..	5,500 <i>b</i>	
12	<i>Brunswick</i> .—Maine .. .. .	4,259	..	..	583·7
	Bowdoin College Library .. .. .	..	..	24,860 <i>b</i>	
13	<i>Burlington</i> .—Vermont .. .. .	4,271	..	..	215·4
	Vermont University Library .. .. .	..	..	9,200 <i>b</i>	
14	<i>Cambridge</i> .—Massachusetts .. .. .	8,409	..	..	814·6
	Harvard University Library .. .. .	..	1638	68,500 ? <i>a b</i>	

	Names of the Towns, the States to which they belong, and their Libraries.	Population.	When Founded.	Volumes of Printed Books, in 1846.	No. of Volumes to every 100 of the Population
15	<i>Carlisle</i> .—Pennsylvania .. .. . Dickinson College Library .. .. .	4,351	..	.. 11,200 <i>b</i>	257.4
16	<i>Chapel Hill</i> .—North Carolina .. .. . University Library .. .. .	..	..	10,000 <i>b</i>	..
17	<i>Charleston</i> .—South Carolina .. .. . Charleston Library Society .. .. .	29,261	..	15,000 <i>a</i>	51.3
18	<i>Charlottesville</i> .—Virginia .. .. . University Library .. .. .	1000?	..	16,000 <i>b</i>	1600.0
19	<i>Cincinnati</i> .—Ohio .. .. . 1. Lane Seminary Library .. .. . 2. Mercantile Library .. .. .	46,338	..	10,500 <i>b</i> 5,000 <i>a</i>	33.1
20	<i>Clinton</i> .—New York .. .. . Hamilton College Library .. .. .	800	..	7,000 <i>b</i>	875.0
21	<i>Columbia</i> .—South Carolina .. .. . Columbia College Library .. .. .	3,500	..	15,000 <i>b</i>	428.6
22	<i>Easton</i> .—Pennsylvania .. .. . Lafayette College Library .. .. .	673	..	5,000 <i>b</i>	742.9
23	<i>Gambia</i> .—Ohio .. .. . Kenyon College Library .. .. .	292	..	8,750 <i>b</i>	2962.3
24	<i>Geneva</i> .—New York .. .. . Geneva College Library .. .. .	3,500	..	5,400 <i>b</i>	150.0
25	<i>Georgetown</i> .—District of Columbia .. .. . Georgetown College Library .. .. .	7,313	..	25,000 <i>b</i>	341.9
26	<i>Gettysburg</i> .—Pennsylvania .. .. . Theological Seminary Library .. .. .	1,908	..	7,000 <i>b</i>	366.9
27	<i>Hanover</i> .—New Hampshire .. .. . Dartmouth College Library .. .. .	2,613	..	16,500 <i>b</i>	631.4
28	<i>Hartford</i> .—Connecticut .. .. . Mechanics' Library .. .. . Trinity College Library .. .. .	9,468	..	8,000 <i>d</i> 7,949 <i>b</i>	168.5
29	<i>Hudson</i> .—Ohio .. .. . Western Reserve College Library .. .. .	..	..	6,247 <i>b</i>	..
30	<i>Maryville</i> .—Tennessee .. .. . South-Western Theological Seminary Library .. .. .	300	..	6,000 <i>b</i>	2000.0
31	<i>Meadville</i> .—Pennsylvania .. .. . Alleghany College Library .. .. .	1,319	..	8,000 <i>b</i>	696.5
32	<i>Middlebury</i> .—Vermont .. .. . Middlebury College Library .. .. .	3,162	..	7,054 <i>b</i>	223.1
33	<i>Middletown</i> .—Connecticut .. .. . Wesleyan University Library .. .. .	3,511	..	11,000 <i>b</i>	313.3
34	<i>Nashville</i> .—Tennessee .. .. . Nashville University Library .. .. .	6,929	..	10,000 <i>b</i>	144.4
35	<i>New Brunswick</i> .—New Jersey .. .. . Rutger's College Library .. .. .	8,639	..	9,000 <i>b</i>	104.2
36	<i>Newhaven</i> .—Connecticut .. .. . 1. Yale College Library .. .. . 2. Livonian Society Library .. .. . 3. Library of 'Brethren in Unity' .. .. .	12,960	1700 }	34,500 ? <i>d</i>	270.0
37	<i>Newport</i> .—Rhode Island .. .. . Redwood Library .. .. .	8,333	..	5,000 <i>a</i>	60.0

	Names of the Towns, the States to which they belong, and their Libraries.	Population.	When Founded	Volumes of Printed Books. In 1846.	No. of Volumes to every 100 of the Population
38	<i>New York.</i> —New York .. .. .	312,710	..	..	35.0
	1. New York Library Society .. .. .	..	1754	30,000 <i>c</i>	
	2. Mercantile Library .. .. .	..	..	25,000 ? <i>d</i>	
	3. New York Theological Seminary Library ..	..	..	16,000 <i>b</i>	
	4. Columbia College Library .. .. .	..	1754	14,000 <i>a</i>	
	5. New York Historical Society .. .. .	..	1804	12,000 ? <i>d</i>	
	6. Episcopal Theological Seminary Library ..	..	..	7,260 <i>b</i>	
	7. New York Hospital Library .. .. .	..	..	5,000 <i>a</i>	
39	<i>Philadelphia.</i> —Pennsylvania .. .. .	228,691	..	..	53.4
	1. Philadelphia Library Company .. .. .	..	1731	55,000 <i>d</i>	
	2. American Philosophical Society's Library ..	..	1740	15,000 <i>d</i>	
	3. Apprentices' Library .. .. .	..	..	14,000 <i>d</i>	
	4. Library of the Academy of Natural Sciences ..	..	1807	9,000 <i>d</i>	
	5. Pennsylvania Hospital Library .. .. .	..	..	8,000 <i>d</i>	
	6. Mercantile Library .. .. .	..	1822	6,000 <i>d</i>	
	7. Philadelphia Athenæum Library .. .. .	..	1815	5,000 <i>d</i>	
	8. Pennsylvania University Library .. .. .	..	1791	5,000 <i>b</i>	
	9. German Society Library .. .. .	..	..	5,000 <i>d</i>	
40	<i>Portsmouth.</i> —New Hampshire .. .. .	7,887	..	..	76.1
	Portsmouth Athenæum Library .. .. .	..	..	6,000 <i>a</i>	
41	<i>Prince Edward County.</i> —Virginia .. .. .	..	..	..	
	Hampden Sidney College .. .. .	..	..	8,000 <i>b</i>	
42	<i>Princeton.</i> —New Jersey .. .. .	2,000	..	..	975.0
	1. New Jersey College .. .. .	..	..	12,500 <i>b</i>	
	2. Princeton Theological Seminary Library ..	..	..	7,000 <i>b</i>	
43	<i>Providence.</i> —Rhode Island .. .. .	23,171	..	..	138.9
	1. Brown University Library .. .. .	..	..	20,000 <i>a</i>	
	2. Providence Athenæum Library .. .. .	..	1836	12,185 <i>f</i>	
44	<i>Richmond.</i> —Virginia .. .. .	20,153	..	..	59.5
	Virginia State Library .. .. .	..	..	12,000 <i>a</i>	
45	<i>Saint Louis.</i> —Missouri .. .. .	16,469	..	..	87.0
	1. Saint Louis University Library .. .. .	..	..	7,900 <i>b</i>	
	2. Kempen College Library .. .. .	..	..	6,400 <i>b</i>	
46	<i>Salem.</i> —Massachusetts .. .. .	15,082	..	..	66.3
	1. Historical Society Library .. .. .	..	..	..	
	2. Salem Athenæum Library .. .. .	..	..	10,000 ? <i>d</i>	
	3. Salem Museum Library .. .. .	..	..	..	
47	<i>Schenectady.</i> —New York .. .. .	6,784	..	..	195.0
	Union College Library .. .. .	..	..	13,000 <i>b</i>	
48	<i>Tuscaloosa.</i> —Alabama .. .. .	1,949	..	..	307.8
	Alabama University Library .. .. .	..	..	6,000 <i>b</i>	
49	<i>Washington.</i> —District of Columbia .. .. .	23,364	..	..	119.8
	Congress Library .. .. .	..	..	28,000 <i>a</i>	
50	<i>Waterville.</i> —Maine .. .. .	2,971	..	..	235.6
	Waterville College Library .. .. .	..	..	7,000 <i>b</i>	
51	<i>Williamsburg.</i> —Virginia .. .. .	1,600	..	..	312.5
	William and Mary College Library .. .. .	..	..	5,000 <i>b</i>	
52	<i>Williamstown.</i> —Massachusetts .. .. .	2,153	..	..	318.3 <i>g</i>
	Williamstown University Library .. .. .	..	..	7,500 <i>b</i>	
53	<i>Worcester.</i> —Massachusetts .. .. .	7,497	..	..	174.0
	American Antiquarian Society's Library ..	..	..	13,000 <i>d</i>	

## Summary.

	Name of State.	No. of Libraries.	No. of Volumes.	Population of the whole State.	Ratio of Volumes to every 100 of Population.
1	Alabama .....	1	6,000	590,756	1·1
2	Columbia, District of.....	2	53,000	43,712	121·2
3	Connecticut .....	6	81,449	309,978	26·3
4	Georgia .....	1	13,000	691,392	1·9
5	Kentucky .....	1	7,000	779,828	0·9
6	Louisiana .....	1	5,500	352,411	1·6
7	Maine .....	3	38,860	501,793	7·7
8	Maryland .....	1	12,000	469,232	2·6
9	Massachusetts .....	14	200,757	737,699	27·2
10	Missouri .....	2	14,300	383,702	3·7
11	New Hampshire.....	2	22,500	284,574	7·9
12	New Jersey .....	3	28,500	373,306	7·5
13	New York .....	12	151,660	2,428,921	6·2
14	North Carolina .....	1	10,000	763,419	1·3
15	Ohio .....	4	30,497	1,519,467	2·0
16	Pennsylvania .....	14	159,200	1,724,033	9·2
17	Rhode Island.....	3	37,185	108,830	34·2
18	South Carolina .....	2	30,000	594,398	5·0
19	Tennessee .....	2	16,000	829,210	2·0
20	Vermont .....	2	16,254	292,948	5·5
21	Virginia .....	4	41,000	1,239,797	3·3
	Total .....	81	974,662		

## Authorities.

a. See Naumann's *Serapeum*, 1846, pp. 146-161, &c.

b. See *American Almanac*, 1846, pp. 180-186.

c. See Shattuck, Report of the Census of Boston, 1845, p. 176.

d. Private information.

e. Private information. In the *Serapeum* the number is stated at 40,000, but this includes *duplicates*, of which the number in the text is *exclusive*.

f. See Tenth Annual Report of the Directors of the Providence Athenæum, Sept. 1845, p. 9.

\*.\*g. Although, for uniformity's sake, the ratio of volumes to population is given, as well in the small towns or villages, which happen to be the seats of colleges, as in the principal towns, it will be evident that in such cases that criterion is of little value. The number of volumes compared with the number of *students* would afford a better one. In 1846, Yale College had 394 students; Dartmouth, 331; Harvard University, 280; Union College, Schenectady, 242; New Jersey College, Princeton, 190; Bowdoin College, Brunswick, 182; Virginia University, Charlottesville, 170; Brown University, Providence, 157; North Carolina University, Chapel Hill, 150; Columbia College, 150; Georgetown College, 140; Williamstown University, about 140; Amherst College, 140; Hamilton College, Clinton, 126; Pennsylvania University, 120; Vermont University, Burlington, about 120; the Wesleyan University, at Middletown, 105; Columbia College, New York, 104. Yale College, therefore, possesses about 89 volumes to each student; Dartmouth, 50; Harvard University, 245; Union College, 54; New Jersey College, 66; Bowdoin College, 136; Virginia University, 94; Brown University, 128; North Carolina University, 66; Columbia College, 100; Georgetown College, 179; Williamstown University, 53; Amherst College, 107; Hamilton College, 55; Pennsylvania University, 42; Vermont University, 77; the University at Middletown, 104; and Columbia College, 135.

## ADDENDA.

- (155.)—*London*. The number of volumes added to the library of the British Museum, during the year 1847, (exclusive of those contained in the Grenville and Morrison collections, bequeathed or presented in 1846, and comprised in the preceding enumeration) is about 24,000, which will make the present total number of volumes about 374,000.
- (215.)—*Paris*. Independently of the libraries named in the text, which are strictly public, there are about 27 others in the French capital, containing, it is said, not less than 515,000 volumes, most of which are virtually public, and all of which are likely, under the influence of the great events which are now transpiring, to become as much so as may be consistent with their more immediate purpose. Amongst these are the Libraries of the National Palaces, of the different departments of Government, of the Sorbonne, (about 40,000 volumes) and of other educational establishments.
- (279.)—*Upsal*. The University Library of Upsal has received two remarkable accessions by bequest, during the year 1847; the first, the collection of Fagelstrom, which has been said to contain 22,000 volumes; the second, the Brinckman collection, said to contain 40,000 volumes: but it is probable that these numbers are somewhat exaggerated.

INDEX, *shewing the Names of Cities containing Libraries of 10,000 Volumes and upwards, under the respective States to which they belong.*

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*Report of the Registration Committee to the Council of the Statistical Society, 5th June, 1847.*

THE Scottish Registration Committee appointed by the Council on the 13th March, 1847, "to consider certain Schedules and Provisions of the proposed Registration Bill for Scotland, to recommend Forms, and to communicate with the proper Authority on the subject;" beg to report, that the Committee, at their meeting on the 16th March, 1847, on examining the proposed Registration Bill, found the Schedules defective in the following particulars, viz.:

**In Marriage Schedule—**

1. The usual and present residence of the parties omitted.
2. Their ages not given; the parties being inadequately distinguished as "Minors," and of "Full Age."
3. The professions of the parties are omitted, while those of their parents are given instead.
4. "Civil Condition" given, but it would be worth while, in the case of widows and widowers, to know when the parties became such, and how often.
5. The number of children of each party by former marriage not obtained.
6. The place of birth of the parties marrying not stated.
7. The father's name only given, whereas the names of both parents should be furnished.

**In Births' Schedule—**

1. The items to determine child's identity, inadequate.
2. The birth-place of the parents omitted.
3. The marriage-place of the parents not given.
4. The number and sex of former children omitted.
5. The signatures of the parents from the Register Book should be required.
6. The certificate of the accoucheur, nurse, or persons present is omitted.
7. The place of registry omitted from the entry.

**In Deaths' Schedule—**

1. The arrangement of the name and description incomplete.
2. A certificate signed by the medical attendant should be required, stating the cause of death, and when the party was last seen by him.
3. The burial place and undertaker's name are omitted.
4. Place of birth and time of residence in the district omitted.
5. The rank or profession, and names of the parents omitted.
6. No statement as to whether married, to whom, at what age, or where.
7. Issue of the marriage living and dead, and the name and age of each should be furnished.
8. The signature of a witness, as well as of the informant, is wanting.

To remedy the defects now pointed out in the Schedules printed with the proposed Bill, the Committee suggested the substitution of the following three forms of Schedules A, B, and C:—

In order to determine whether any practical difficulties might be found in eliciting for registration the various facts required in those forms, the Committee caused an experiment to be made in several districts of the metropolis, and it was found that all the information needed could be readily obtained from the public, no objection arising on furnishing it. The results of this attempt at practically working out the Schedules were submitted to the Committee, and considered as satisfactory evidence that no insuperable difficulties existed in the way of carrying out the plan on a national scale. Copies of the three Schedules referred to were forwarded to Sir George Grey and the Lord Advocate of Scotland, and subsequently a deputation from the Committee waited on the Lord Advocate, and explained that the object which the Council had in view was simply to assist in securing for Scotland such a form of registration as the present advanced state of statistical science seemed to demand; and believing that a more complete and useful form of registry than that required under the proposed Bill might without difficulty be carried out, the Council of the Statistical Society was anxious that the people of Scotland should possess that system of registration which was best calculated to exhibit their true social and civil condition.

The attention of the Lord Advocate was next directed to the defects in the Schedules of the Bill then passing through the House, and the advantages which it is believed would arise from the adoption of the proposed Schedules A. B. and C. were pointed out. Throughout the interview the Lord Advocate entered most fully and minutely into the arguments brought forward by the deputation, and promised to give the whole subject his particular consideration, although he could not engage to adopt all the suggested alterations; and he further expressed it as his opinion, that the better plan would be to pass the present Bills with but little alteration in the Schedules, and to introduce such provisions as would enable the competent authorities, with the sanction of the Queen in Council, to make such alterations and improvements in the modes of registration as experience may show to be necessary and expedient.

Subsequently to this interview, it was considered advisable to forward Schedules, on the model of those suggested, for use to some district of Scotland, in order to discover whether any difficulty was likely to arise in that part of the kingdom, with respect to the peculiar form of registration suggested. Dr. Watt, of Glasgow, who has had great experience in such matters, kindly undertook to practically test the Schedules in that city, and the Committee, at its meeting on the 15th ultimo, was furnished with the results obtained by Dr. Watt, consisting of a number of Registrations of the "Private Burials in the Cathedral burying-grounds," of "Poor buried at the public expense," and of "Burials by the Royal Infirmary of Glasgow." The following extract from a letter of Dr. Watt, will show that he considers no difficulties exist in the way of getting the Schedules filled up:—

"As Mr. Farr did not state the time at which he wished the enclosed schedules returned to him, I have delayed making the returns till they could be filled up for a complete month. I regret, however, that some little delay has taken place in obtaining the returns for the poor buried at the public expense, and from the Royal Infirmary. These schedules have been filled up by the parties who make the returns for

## SCHEDULE A.—

COUNTY—Middlesex.			DISTRICT—Marylebone.			
No.	When, where, and how, Married.	Signatures of the Parties.	Residence.		Age.	Rank or Profession.
			Present.	Usual.		
11	On March third, 1847. At Marylebone Parish Church. Marriage, after Banns, was solemnized between us according to the Rites and Ceremonies of the Established Church.	William Hastings	3, South St., Marylebone	Chelmsford, Essex	32	Carpenter
		Sophia Ann Mitchell	17, High St., Marylebone	17, High St., Marylebone	20	Dressmaker

## SCHEDULE B.—

COUNTY—Middlesex.				DISTRICT—St. Pancras.		SUB-DISTRICT—	
No.	Child.				Parents.		
	Name, and whether present or not.	Sex.	When Born. Year. Day. Hour.	Where Born. If in Lodgings— so stated.	Father.		When and where Married. Issue Living and Deceased.
					Name. Rank or Profession. Age. Birth-place.		
98	William Jones (Present.)  Alteration of name, if any, and date thereof.	M.	1847.  February Eleventh.  5 <sup>h</sup> 30 <sup>m</sup> A.M.	169, Tottenham Court Road.	Henry Jones, Corn Dealer, 40, Tingewick, Bucks.		1830, St. Pancras.  4 boys, 4 girls, living.  1 girl dec.

## SCHEDULE C.—

COUNTY—Middlesex.				DISTRICT—Poplar.		SUB-DISTRICT—	
No.	Description.				(1) Cause of Death. Disease ;	(1) Burial Place. (2) Undertaker by whom Certified.	
	(1) Name ; (2) Rank or Pro- fession.	Sex.	Age.	(1) When and (2) Where Died. No. of Street ; Year, Day, Hour.	(2) Medical Attendant by whom Certified ; when he last saw Deceased.		
1476	William Canty, Dock Labourer.	M.	62	1847. February Twenty-eighth.  6½ <sup>h</sup> A.M.  At 16, Cottage Row.	Pneumonia, 2 months.  As certified by H. Bloomfield, M.D., who saw deceased Feb. 27th.	Catholic Burial Ground, Wade Street.  As certified by M. Rutley, Undertaker.	

## MARRIAGES.

1847. MARRIAGES Solemnized at the Parish Church in the Parish of Marylebone.

Condition.			Birth-place.	Parents.		Witnesses and Officiating Minister.
If a Widower or Widow. Date of decease of former Wives or Husbands.	Children by each former Marriage.			Names.	Rank or Profession.	
	Living.	Dead.				
Widower, 4 Nov., 1840	2	1	Bristol	Peter Hastings, dec. and Ann Hastings, m. n. Payne	Upholsterer Schoolmistress	John Hastings, Jane Mitchell, Witnesses.
Spinster			Longbridge, Deverell, Wilts	Geoffry Mitchell and Sarah Mitchell, m. n. Evans, dec.	Butcher	James Hollingshead, Vicar, Officiating Minister.

## BIRTHS.

Tottenham Court.

BIRTHS Registered by John Wells, Registrar.

	Informants.	Witnesses.	
Mother.	Signatures of Father and Mother and other Informants, and Residence if out of the house in which the birth occurred.	Accoucheur, Nurse by whom certified; and Signatures of Occupier or other Witnesses.	When, where, and by whom Registered.
Name; Maiden Name; Rank or Profession; Age; Birthplace.			
Harriet Jones, maiden name Hills, (her 9th child,) 37, St. Pancras.	Henry Jones, Father  Harriet Jones, Mother	Eupham. Curry, Nurse. Witness.  Certified by M. Clayton, Accoucheur.	1847. March 10th, at 169, Tottenham Court Road. John Wells, Registrar.

## DEATHS.

Poplar. DEATHS Registered by T. W. Gagen, Registrar.

(1) Where Born and (2) How long in this District.	(1) Parents' Names and (2) Rank or Profession.	If deceased was Married.		Signatures of (1) Informant, (2) Witness, and (3) Registrar, (1) Date of Registration.
		Where, at what age, and by whom.	Issue, in order of Birth, their names and ages.	
County of Cork, Ireland.  36 years in Poplar.	Timothy Cauty Shoemaker, dec.  Mary Cauty, m. n. Nicolas, dec.	Scrill parish, Ireland, at age 22, to Honora M'Carty.	1. Timothy, 31 2. William, 30 3. Mary, 29 4. John, dec. at 27, in 1846 5. Catherine, dec. at 1, in 1820 6. Stephen, 21	Honora Cauty, her X mark, Widow, Informant.  Mary Cauty, daughter, Witness.  T. W. Gagen, Registrar, March third, 1847

the Glasgow Mortality Bills, and who receive very small salaries for their respective labours. They offered to make out clean copies of the schedules, but I think it better to transmit them off hand in their original state."

"It will be observed that some of the lists are not so complete as could be wished. This arises from the informants not being aware that so much information was required of them. Were it known to the public that the various particulars stated in the schedules were required, I have no doubt but they could, without difficulty, be filled up with accuracy for Glasgow." "*From what I know of the subject, I have no doubt but they would be filled up with perfect accuracy, provided care is taken to appoint properly qualified persons as registrars.*"

Your Committee was further of opinion that, in the event of such Schedules being adopted, great advantage would result to the public, by issuing forms of certificates embodying the principal facts intended to be set forth in the Schedules themselves, and that they should be delivered, by the respective registrars, to the parties interested on the various occasions of Marriage, Birth, and Death. That these should be regarded as the "Original Certificates," and have appropriate counterparts, and that no other original certificates should ever be issued of any one of these events, but that any other documents of a similar kind which might be issued should only be a certified copy by the proper registrar.

(A.)

#### CERTIFICATE OF MARRIAGE.

DISTRICT, Marylebone. No. in Register, 11.

On March 3rd, 1847.

At Marylebone Parish Church.

MARRIAGE, *after Banns*, was solemnized between us, according to *the rites and ceremonies of the Established Church.*

SIGNATURE, *William Hastings.*

DESCRIPTION	{	residence { present, } 3, <i>South Street, Marylebone.</i>
		usual, } <i>Chelmsford, Essex.</i>
		age, 32.
		rank or profession, <i>carpenter.</i>
		condition, <i>widower.</i>
		if widower { former } first deceased in { children by,
	{ wives, } 1840, 4th Nov. { living 2, dead 1.	
		birth-place, <i>Bristol.</i>
		parents' names and { <i>Peter Hastings, dec., upholsterer, and Ann</i>
		rank or profession, { <i>Hastings, M. N. Payne, schoolmistress.</i>

SIGNATURE, *Sophia Ann Mitchell.*

DESCRIPTION	{	residence { present, } 17, <i>High Street.</i>
		usual, } <i>Ditto.</i>
		age, 20.
		rank or profession, <i>dressmaker.</i>
		condition, <i>spinster.</i>
		if widow { former } first deceased in { children by
	{ husband } .... .. { living — dead —	
		birth-place, <i>Longbridge, Devereil, Wills.</i>
		parents' names and { <i>Geoffrey Mitchell, butcher, and Sarah</i>
		rank or possession, { <i>Mitchell, M. N. Evans, dec.</i>

WITNESSES, *John Hastings—Jane Mitchell.*

OFFICIATING MINISTER, *James Hollingshead, Vicar.*

(B.)

## CERTIFICATE OF BIRTH.

DISTRICT, St. Pancras. SUB-DISTRICT, Tottenham Court. No. in Register, 98.  
CHILD, Name, and Sex, *William Aste*, (present.) born 5h. 30m., February 11th, 1847, at 169, *Tottenham Court Road*.

PARENTS—Father	{	name, <i>Henry Aste</i> .	
		rank or profession, <i>corn dealer</i> .	
		age, 40.	
		born at <i>Tingewick, Bucks</i> .	
Mother	{	married first in 1830 at <i>St. Pancras</i> .	
		issue, 4 boys, 4 girls living; 1 girl dec.	
		name, <i>Harriett Aste</i> , M. N. <i>Hills</i> ( <i>her ninth child</i> ).	
		rank or profession,	
		{	age, 37.
		{	born at <i>St. Pancras</i> .
		{	married first in ( <i>see Father</i> ).
		{	issue, <i>ditto</i> .

INFORMANTS AND THEIR SIGNATURE, *Henry Aste*, father; *Harriett Aste*, mother.

WITNESSES, *Euphemia Curry*, nurse, certified by *M. Clayton*, accoucheur.

REGISTERED, on March 10th, 1847, at 169, *Tottenham Court Road*, by *John Wells*, Registrar.

(C.)

## CERTIFICATE OF DEATH.

DISTRICT, Poplar.—SUB-DISTRICT, Poplar. No. in Register, 1476.

NAME	{	<i>William Canty</i> .	
		rank or profession, <i>dock labourer</i> .	
		sex, <i>male</i> .	
		age, 62.	
		{	died on the 28th of February, 1847, 6½, A.M., at 16 <i>Cottage Row</i> .

CAUSE OF DEATH, *Pneumonia*, two months, as certified by *H. Bloomfield*, who last saw deceased February 27, 1847.

BURIAL PLACE, *Catholic burial-ground*, *Wade Street*, as certified by *M. Rutley*, undertaker.

BORN AT *county of Cork, Ireland*; lived in this district, 36 years in *Poplar*.

Parents' names and	{	Father— <i>Timothy Canty</i> , shoemaker, dec.
		rank or profession, } Mother— <i>Mary Canty</i> , M. N., <i>Nicholas</i> dec.

MARRIED in the parish of *Scrill, Ireland*, at the age of 22, to *Honora McCarty*, by whom he had

ISSUE, (1) *Timothy*, 31, (2) *William*, 30, (3) *Mary*, 29, (4) *John*, dec. at 27, in 1846, (5) *Catherine*, dec. at 1, in 1820, (6) *Stephen*, 21.

INFORMANT, *Honora Canty*, her ✕ mark, widow.

WITNESS, *Mary Canty*, daughter.

REGISTERED on March 3rd, 1847, by *T. W. Gagen*, Registrar.

The Committee, after having given much attention to this subject, are convinced that the adoption of the proposed system of registration possesses scientific and legal merits beyond those of any other yet proposed in this country, and they regret that the framers of the Registration Bill for Scotland have not wholly concurred with them in their view of the question. As it is now understood, however, that the Bill will not pass during the present session of Parliament, and that the whole is likely to be further considered, it is to be hoped, from the willingness which the Lord Advocate evinced to introduce an efficient mode of registration, that reason will be found hereafter to carry out the system proposed by your Committee.

5th June, 1847.

## MISCELLANEOUS.

## PROCEEDINGS OF THE STATISTICAL SOCIETY OF LONDON.

*First Ordinary Meeting, 1847-8. Monday, 15th Nov., 1847.*

Lieut.-Colonel W. H. Sykes, V.P.R.S., Vice-President,  
in the Chair.

The following Papers were read:—

1. Report of the Statistical Section of the Oxford Meeting of the British Association. By Joseph Fletcher, Esq., Barrister-at-law, Hon. Sec., Statistical Society of London.
2. An Analysis of the Returns made to the Stamp Office of their Shareholders, in January, 1847, by the Joint Stock Banks carrying on business in London. By J. W. Gilbert, Esq., F.S.S.
3. Mortality among Blind Children. By Thomas Wigglesworth, Esq., F.S.S.

*Second Ordinary Meeting, 1847-8. Monday, 20th Dec., 1847.*

Lieut.-Colonel W. H. Sykes, V.P.R.S., Vice-President,  
in the Chair.

The following Gentlemen were elected Fellows:—

W. Neilson Hancock, Esq.	John Barton, Esq.
Travers Twiss, D.C.L.	Rupert Kettle, Esq.
John Hill Williams, Esq.	Albany Fonblanque, Esq.
William Wilberforce Bird, Esq.	W. Torrens McCullagh, Esq.
R. Hartley Kennedy, Esq.	W. Edward Hillman, Esq.
James Kennedy, Esq.	Thomas Banfield, Esq.

David Walker, Esq., M.A.

The following Paper was read:—

The Progress of the Prussian Nation, 1805, 1831, 1842. By T. C. Banfield, Esq., F.S.S.

*Third Ordinary Meeting, 1847-8. Monday, 17th Jan., 1848.*

Lieut.-Colonel W. H. Sykes, V.P.R.S., Vice-President,  
in the Chair.

The following Gentlemen were elected Fellows:—

Martin Thackery, Esq.	Professor Royle.
Major George Balfour.	

G. R. Porter, Esq., Treasurer, having taken the Chair, the following Paper was read:—

Report of the Committee of Council appointed to Investigate the State of the Houses and Inhabitants of Church Lane, St. Giles's. By Lieut.-Colonel W. H. Sykes, V.P.R.S.

*Fourth Ordinary Meeting, 1847-8. Monday, 21st Feb., 1848.*

Lieut.-Colonel W. H. Sykes, V.P.R.S., Vice-President,  
in the Chair.

The following Gentlemen were elected Fellows:—

James Henry Young, Esq.	Charles T. Beke, Ph.D.
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The following Fellows were appointed Auditors of the Society's Accounts for 1847:—

John Bowring, Esq., M.P. | John Towne Danson, Esq., F.S.S.  
Travers Twiss, Esq., D.C.L.

The following Papers were read:—

1. A Contribution towards an investigation of the changes which have taken place in the Condition of the People of the United Kingdom during the eight years extending from the Harvest of 1839 to the Harvest of 1847; and an attempt to develop the connexion between the changes observed and the variations occurring during the same period in the prices of the most necessary articles of food. By John Towne Danson, Esq., F.S.S.
2. On the Health of Nightmen, Scavengers, and Dustmen. By W. A. Guy, M.B., Hon. Sec., Statistical Society of London.

*Fifth Ordinary Meeting, 1847-8. Monday, 20th March, 1848.*

Right Hon. Holt Mackenzie, Vice-President, in the Chair.

The following Gentlemen were elected Fellows:—

Mathew Clarke, Esq. | George Cutcliffe, Esq.

The following Paper was read:—

- A Statistical View of the principal Public Libraries in Europe and the United States of North America. By Edward Edwards, Esq., F.S.S.

*Sixth and Seventh Ordinary Meetings, 1847-8. Monday, 17th April and 15th May, 1848.*

Right. Hon. Holt Mackenzie, Vice-President, in the Chair.

The following Gentlemen were elected Fellows:—

Charles Meyer, Esq., Ph.D. | John Bonham Carter, Esq., M.P.  
George Head Head, Esq. | Edward Edwards, Esq. | Captain Mark Huish.

The following Paper was read:—

- Report to the Council of the Statistical Society of London from a Committee of its Fellows, appointed to make an investigation into the state of the Poorer Classes in St. George's in the East, with the sum of 25*l.*, given for the purpose by Henry Hallam, Esq., F.R.S., aided by a donation of 10*l.* from R. A. Slaney, Esq., M.P., and further sums from the general resources of the Society.

*Eighth Ordinary Meeting, 1847-8. Monday, 19th June, 1848.*

Sir John P. Boileau, Bart., F.R.S., Vice-President, in the Chair.

The following Gentlemen were elected Fellows:—

T. Sopwith, Esq. | E. Osborne Smith, Esq.

The following Paper was read:—

- On the Sub-division of Real Property, and its effects upon Agriculture and the Produce of the Soil in France, shown by the Facts adduced in the recent work of M. Mounier and M. Rubichon on the Agriculture of France. By the Right Hon. the Earl Lovelace, F.S.S.

# STATE OF THE PUBLIC HEALTH IN THE FIRST QUARTER OF THE YEAR 1848.

"THE Quarterly Returns are obtained from 117 Districts, sub-divided into 582 Sub-Districts. *Thirty-six* Districts are in the Metropolis, and the remaining 81 comprise, with some agricultural Districts, the principal towns and cities of England. The population was 6,612,958 in 1841."

The mortality has been high in the quarter ending March 31, 1848, but rather lower than in the previous quarter; and, taking the increase of population into account, higher than in the corresponding quarter of the year 1847. The deaths returned were 57,710 in the last, and 57,925 in the previous quarter. The deaths in the corresponding quarter of 1847 were 56,105.

The smallest number of deaths returned in the 10 last winter quarters was 42,410 in 1839. The mortality was below the average in the winters of 1839, 1842, 1843, and 1844: in the severe winter of 1845 it was 49,996, which is considerably above the average. In the mild winter of 1846 it was much below the average. The rest of the year was unfavourable to health; some of the diseases of hot climates set in; the potato crop failed in England and Ireland, with disastrous effects. In 1847 scurvy, typhus, and other zymotic diseases prevailed; and at the end of the year influenza broke out. Its ravages extended over the country, and continued in some districts through the month of January 1848. The results are shown below.

	1839	1840	1841	1842	1843	1844	1845	1846	1847	1848
Deaths Registered in the March quarters of 10 years.....	42,410	46,376	46,967	44,903	43,748	46,136	49,996	43,850	56,105	57,710
Deaths which would have been registered if the mortality had been uniform, and the numbers had increased from 1839 at the rate of 1.75 per cent. annually.	43,589	44,352	45,128	45,917	46,721	47,539	48,371	49,217	50,078	50,955
UNHEALTHY SEASONS Difference above the calculated number..	..	2,024	1,839	..	..	..	1,625	..	6,027	6,755
HEALTHY SEASONS. Difference below the calculated number..	1,179	..	..	1,014	2,973	1,403	..	5,367	..	..

*Deaths Registered in each of the Four Quarters of the Nine Years 1839—1847, and in the March Quarter, 1848, in 117 of the Districts of England and Wales.*

Quarters ending	1839	1840	1841	1842	1843	1844	1845	1846	1847	1848
March ..	42,410	46,376	46,967	44,903	43,748	46,136	49,996	43,850	56,105	57,710
June ....	41,241	42,074	39,133	38,569	40,343	38,977	40,847	43,734	51,585	..
September	37,317	39,198	36,058	39,409	36,953	38,933	36,139	51,427	49,479	..
December	41,740	44,186	39,292	39,662	42,608	44,080	39,291	53,093	57,925	..
Total ..	162,711	172,131	161,450	162,513	163,652	168,126	166,273	192,104	215,094	..

The Mortality of the District of Lewisham, and of the Sub-district of Hampstead, is included in this Table throughout.

In London 16,455 deaths were registered in the first 13 weeks of 1848, and 15,289 in the first 13 weeks of 1847. The deaths in the winter of 1846 were only 12,518; in 1845, however, they had been 14,686. The mortality was high during

the first 5 weeks of the present year. In the week ending February 5, 1453 were returned exclusive of deaths by violence, and sudden deaths; in the next week the deaths were 1,296; the temperature rose; and in the week ending February 19th, the deaths were 1,102; in the five following weeks the deaths only varied from 1,090 in the first, to 1,054 in the last week but one of the quarter ending April 1. Typhus is still epidemic in London, and destroys the lives of from 60 to 80 persons weekly. Small-pox, measles, scarlatina, and hooping cough were fatal to many. The deaths ascribed to influenza in the 13 weeks were 102, 102, 89, 56, 59, 47, 27, 33, 18, 11, 10, 16, 8. Pulmonary diseases (exclusive of \*consumption) were little more than half as fatal at the end as they were at the beginning of the quarter. A great difference will be observed in the causes of death in 1847 and 1848, although the mortality was high in both winters. In the winter of 1847 the deaths from diseases of the lungs were 4,056; in 1848 they were 3,357; on the other hand, zymotic diseases were more than twice as fatal in 1848 as they were in 1847.

In the districts of the kingdom generally, exclusive of London, the deaths in the winters of the five years 1844—8, were 32,494, 35,310, 31,332, 40,816, and 41,255. The deaths in the districts of Lancashire and Cheshire in the five winters were 11,368, 12,896, 11,928, 15,557, and 15,444, and nearly equal in the last two years to the deaths in London, although the population was only 1,530,460 in 1841, when the population of London was 1,948,369.

It will be seen from the Registrar's remarks, that typhus, scarlatina, hooping cough, and small-pox, were epidemic in many parts of the country. The mortality of Birmingham, Manchester, and Liverpool, still remains excessively high. The deaths in Birmingham were 1,660; the population was 138,187 in 1841. Birmingham has, in its site, many advantages in a sanatory point of view; and the occupations of the people are, not insalubrious; but the beneficence of nature appears to be defeated by the negligence of the authorities. Water, pure air, and a perfect system of drainage are not provided, as they might be, for the whole town; and the consequence is, that want, and the epidemics abroad, have destroyed thousands of the lives of the inhabitants within the last two years.

The fatal effects of collecting large bodies of labourers without adequate house accommodation have been illustrated in Lincoln. The Registrar of the Home sub-district, after remarking that the deaths in the quarter were 161, adds:—

“This return shows, that within a period of 2½ years, the mortality has been doubled. The fact is accounted for by the increase of a temporary population connected with the formation of railways, without a sufficient increase of accommodation; which has induced typhus and measles. There have been 19 deaths from fever, 14 from influenza, and 27 from consumption.”

But Lincoln itself appears less salubrious than it might be made.

In Nottingham the mortality was high; but not so high as in the winter of 1840.

The mortality in Liverpool and Manchester is still excessively high, but not so high as in the winter of 1847. There is a manifest improvement in Huddersfield, Halifax, Bradford, and Leeds. In Sheffield and York the mortality was higher in 1848 than in 1847.

The extent to which vaccination is neglected in some parts of the country is deplorable and inconceivable. Such facts as the following are, it is to be feared, not uncommon in other districts besides East Sunderland.

“Deaths 140: considerably above the average; 69 more than in the corresponding quarter of last year. The increase is principally to be attributed to the prevalence of small-pox in the district. 47 persons have died of small-pox, (only 1 after vaccination). Out of the 140 deaths 84 are under 5 years.”

\* Here 47 persons, chiefly children, died; and this implies that some hundreds besides were injured and disfigured, by a disease that may be almost altogether prevented by vaccination; which the legislature, under the administration of the Poor Law, has placed within the reach of every poor child in the kingdom\*.

\* An important circular has recently been issued on the subject of vaccination, by the Poor Law Board; at whose request I have instructed the Registrars to present a “notice,” to all who register births, reminding them of the provisions of the Vaccination Act.

## MORTALITY OF THE COUNTRY.

*Quarterly Table of the Mortality in 117 of the Districts of England (including the Principal Towns), showing the Number of Deaths Registered in the Quarters ending March of the Four Years 1845-46-47-48.*

Parts of Divisions and Districts.	Population 1841.	Deaths Registered in the Quarters ending Mar. 31st.			
		Years.			
		1845.	1846.	1847.	1848.
<i>Metropolis*.</i>					
West Districts..	301,326	2,240	1,867	2,146	2,316
North Districts..	376,610	2,817	2,326	2,359	2,946
Central Districts	374,711	2,767	2,156	2,742	2,892
East Districts ..	393,247	2,976	2,503	3,420	3,785
South Districts..	502,475	3,886	3,666	4,122	4,515
Total†.....	1,948,369	14,686	12,518	15,289	16,455
<i>South Eastern Division.</i>					
Maidstone.....	32,310	235	141	231	226
Brighton.....	46,742	262	211	369	353
Isle of Wight ..	42,547	228	178	251	283
Portsea Island ..	53,036	388	290	430	476
Winchester.....	23,044	147	107	173	168
Windsor.....	20,502	97	75	134	148
Total.....	218,181	1,357	1,002	1,588	1,606
<i>South Midland Division.</i>					
St. Albans.....	17,051	121	74	100	107
Wycombe.....	34,150	229	218	190	203
Oxford.....	19,701	110	75	122	113
Northampton ..	28,103	249	186	206	225
Bedford.....	31,767	208	172	279	282
Cambridge.....	24,453	154	139	180	195
Total.....	155,225	1,071	864	1,086	1,125
<i>Eastern Division.</i>					
Colchester.....	17,790	117	123	128	106
Ipswich.....	25,254	124	159	197	181
Norwich.....	61,846	711	325	379	511
Yarmouth.....	24,081	165	232	148	159
Total.....	128,921	1,117	839	852	957
<i>South Western Division.</i>					
Devizes.....	22,130	156	83	162	205
Dorchester.....	23,380	123	107	178	170
Exeter.....	31,333	208	202	230	187
St. Thomas.....	47,105	230	236	274	254
Plymouth.....	36,527	261	194	254	369
Kedworth.....	48,062	268	220	252	275
Penzance.....	50,100	235	234	290	331
Bath.....	69,232	520	388	548	594
Total.....	327,860	2,001	1,654	2,248	2,376
<i>Western Division.</i>					
Bristol.....	64,298	563	427	545	571
Clifton.....	66,233	448	376	508	534
Stroud.....	38,920	235	189	339	266
Cheltenham.....	40,224	267	215	316	237
Hereford.....	34,427	265	208	209	247
Shrewsbury.....	21,620	164	112	165	203
Worcester.....	27,130	173	153	226	237
Kidderminster..	20,408	233	150	218	215
Dudley.....	86,028	776	588	904	831
Walsall.....	34,274	260	259	292	332
Wolverhampton ..	80,722	649	574	769	831
Wolstanton.....	32,669	271	239	325	322
Birmingham.....	138,187	1,275	876	1,157	1,660
Aston.....	50,928	353	265	354	485
Coventry.....	31,028	272	213	216	250
Total.....	776,002	6,144	4,844	6,601	7,221
<i>North Midland Division.</i>					
Leicester.....	50,932	445	342	442	353
Lincoln.....	36,110	196	209	252	183
Nottingham.....	53,080	480	293	379	521
Basford.....	59,634	349	344	514	408
Derby.....	35,615	259	282	278	355
Total.....	234,771	1,720	1,470	1,856	1,918
<i>North Western Division.</i>					
Stockport.....	85,672	721	562	642	712
Macclesfield.....	56,018	482	387	541	559
Great Brough-ton (including Chester).....	49,053	365	279	394	411
Liverpool.....	223,054	1,815	1,934	2,068	2,334
West Derby (adjoining Liverpool) ..	88,652	668	746	891	1,074
Blackburn.....	75,091	642	546	736	582
Preston.....	77,189	643	566	813	716
Rochdale.....	60,577	502	560	482	513
Bury.....	77,496	558	605	796	687
Bolton.....	97,519	813	817	955	914
Wigan.....	66,092	453	538	656	593
Prescott.....	43,739	262	237	481	358
Chorlton.....	33,736	868	699	832	1,029
Manchester.....	192,408	1,922	1,527	2,185	2,079
Salford.....	70,228	497	512	575	650
Ashton.....	173,964	1,655	1,413	1,360	1,642
Total.....	1,530,460	12,896	11,928	15,557	15,444
<i>York Division.</i>					
Sheffield.....	85,076	650	611	693	881
Huddersfield ..	107,140	699	629	1,006	780
Halifax.....	109,175	736	794	839	692
Bradford.....	132,164	1,120	1,003	1,274	891
Leeds & Hunslet.....	168,667	1,228	966	1,557	1,399
Hull.....	41,130	262	309	350	366
York.....	47,779	320	336	372	437
Total.....	691,131	5,915	4,678	6,091	5,415
<i>Northern Division</i>					
Sunderland.....	56,226	325	490	404	543
Gateshead.....	58,747	252	255	330	314
Tynemouth.....	55,625	303	318	434	406
Newcastle-on-Tyne.....	71,850	466	567	655	820
Carlisle.....	36,084	214	248	340	293
Cockermouth.....	35,676	220	213	284	258
Kendal.....	34,694	219	223	277	232
Total.....	328,902	2,009	2,314	2,724	2,848
<i>Welsh Division.</i>					
Abercynny.....	50,834	404	327	450	471
Pontypool.....	25,037	139	210	236	245
Merthyr Tydvil ..	52,864	508	465	508	533
Newtown.....	25,968	151	120	153	186
Wrexham.....	39,542	238	207	336	325
Holywell.....	40,787	311	265	286	287
Anglesey.....	38,105	229	207	244	281
Total.....	273,127	1,980	1,739	2,213	2,336
<i>Ditto, exclusive of the Metropolis.)</i>	4,664,589	35,310	31,332	40,516	41,255
Grand Total..	6,612,958	49,906	43,550	56,105	57,771

\* The mortality of the districts of Wandsworth and Lewisham, and sub-district of Hampstead, is included in the above table, in each of the four years, though the deaths in Wandsworth did not appear in the Weekly Metropolitan Returns till 1843; nor those of Lewisham and Hampstead till 1847.

† The last quarter in London ended April 1, 1848.

‡ The former District of Leeds is now divided into the districts of *Leeds* and *Hunslet* which are both included in the present return.

## MORTALITY OF THE METROPOLIS.

*A Table of the Mortality in the Metropolis, showing the Number of Deaths from all Causes, in the Quarters ending March of the Four Years, 1845-46-47-48.*

CAUSES OF DEATH.	Quarters ending March*				CAUSES OF DEATH.	Quarters ending March*			
	1845.	1846.	1847.	1848.		1844.	1845.	1846.	1847.
ALL CAUSES.....	14,528	12,376	15,289	16,455	III. Scrofula.....	49	75	53	89
SPECIFIED CAUSES.....	14,491	12,322	15,245	16,366	Tabes Mesenterica..	116	139	192	233
I. Zymotic Diseases....	2,519	2,310	1,964	4,203	Phthisis or Con- sumption.....	1,972	1,571	1,823	1,773
SPORADIC DISEASES.					Hydrocephalus....	460	488	440	390
II. Dropsy, Cancer, and other Diseases of uncertain or va- riable Seat.....	819	560	642	576	Cephalitis.....	149	153	156	138
III. Tubercular Diseases..	2,588	2,273	2,508	2,585	Apoplexy.....	343	329	368	364
IV. Diseases of the Brain, Spinal Marrow, Nerves, and Senses	1,733	1,358	1,856	1,786	Paralysis.....	298	273	342	326
V. Diseases of the Heart and Blood Vessels	512	455	666	476	Delirium Tremens..	24	34	47	39
VI. Diseases of the Lungs and of the other Organs of Respiration.....	2,834	2,176	4,056	3,557	Chorea.....	2	7	2	2
VII. Diseases of the Sto- mach, Liver, and other Organs of Digestion.....	868	779	815	856	Epilepsy.....	62	73	113	91
VIII. Diseases of the Kid- neys, &c.....	115	130	169	181	Tetanus.....	3	7	1	1
IX. Childbirth, Diseases of the Uterus, &c.	174	150	205	129	Insanity.....	15	21	28	31
X. Rheumatism, Dis- eases of the Bones, Joints, &c.....	98	121	141	83	Convulsions.....	636	511	619	634
XI. Diseases of the Skin, Cellular Tissue, &c.	7	28	26	22	Disease of Brain, &c.	141	157	179	160
XII. Malformations.....	31	51	49	57	Pericarditis.....	33	17	29	36
XIII. Premature Birth & Debility.....	270	300	337	301	Aneurism.....	21	18	14	15
XIV. Atrophy.....	189	224	239	339	Disease of Heart....	458	429	623	425
XV. Age.....	1,127	612	971	744	Laryngitis.....	23	35	62	46
XVI. Sudden.....	207	137	173	184	Bronchitis.....	632	738	1,661	1,342
XVII. Violence, Privation, Cold, and Intem- perance.....	400	458	428	487	Pleuritis.....	28	33	67	62
					Pneumonia.....	1,296	946	1,390	1,416
I. Small Pox.....	481	77	82	388	Asthma.....	606	244	625	317
Measles.....	381	401	99	465	Disease of Lungs, &c	249	160	251	174
Scarlatina.....	421	221	196	615	Teething.....	227	129	143	134
Whooping Cough.....	411	767	544	374	Quincy.....	25	10	17	35
Croup.....	112	79	67	90	Gastritis.....	14	24	23	31
Thrush.....	50	35	28	40	Enteritis.....	177	117	102	123
Diarrhoea.....	109	119	178	244	Peritonitis.....	44	48	61	74
Dysentery.....	4	20	34	44	Ascites.....	24	29	26	34
Cholera.....	14	7	3	9	Ulceration (of In- testines, &c.).....	25	36	34	38
Influenza.....	34	22	63	578	Hernia.....	31	35	58	33
Purpura and Scurvy	2	5	16	23	Itens.....	38	36	31	35
Ague.....	5	4	4	7	Intussusception....	4	9	9	8
Remittent Fever.....	5	15	26	19	Stricture of the In- testine Canal.....	6	8	7	6
Intermittent Fever and "Worms".....	8	19	19	18	Dis. of Stomach, &c.	68	78	79	95
Typhus.....	362	410	442	922	Disease of Pancreas	..	..	..	1
Metria, or Puer- peral Fever, see Childbirth.....	..	..	..	109	Hepatitis.....	22	39	44	52
Rheumatic Fever, } see Rheumatism }	..	..	..	19	Jaundice.....	32	34	31	31
Erysipelas.....	95	71	116	196	Disease of Liver....	131	131	149	123
Syphilis.....	21	28	34	34	Disease of Spleen..	..	6	1	3
Noma or Canker.....	3	9	3	8	Nephritis.....	6	10	5	7
Hydrophobia.....	1	1	..	1	Nephra (or Bright's Disease) }	..	..	..	41
II. Hemorrhage.....	43	37	58	35	Ischuria.....	..	2	3	1
Dropsy.....	565	195	289	198	Diabetes.....	12	4	9	15
Abscess.....	10	18	18	31	Stone.....	6	7	12	8
Ulcer.....	4	16	19	16	Cystitis.....	3	3	8	11
Fistula.....	1	9	1	6	Stricture of Urethra	13	13	16	13
Mortification.....	53	44	57	58	Dis. of Kidneys, &c.	75	91	116	85
Cancer.....	199	238	180	222	Parameia.....	5	3	2	4
Gout.....	4	3	20	10	Ovarian Dropsy....	6	16	15	16
					Childbirth, see Metria	133	101	146	67
					Dis. of Uterus, &c.	30	30	42	42
					X. Arthritis.....	4	3	1	1
					Rheumatism.....	35	62	73	40
					Disease of Joints, &c.	59	56	67	42
					Caruncle.....	..	1	4	4
					Phlegmon.....	2	9	9	5
					Disease of Skin, &c.	5	18	13	13
					XVII. Intemperance..	15	17	12	17
					Privation.....	8	7	22	18
					Want of Breast Milk, see Privation & Atrophy.....	..	..	..	45
					Neglect.....	..	..	..	4
					Cold, see Privation..	..	..	..	29
					Poison.....	..	..	..	77
					Burns and Scalds..	..	..	..	56
					Hanging, &c.....	..	..	..	53
					Drowning.....	377	434	394	139
					Fractures and Con- tusions.....	..	..	..	33
					Wounds.....	..	..	..	14
					Other Violence.....	..	..	..	89
					Causes not specified	37	54	44	..

\* The mortality of the district of Lewisham, and sub-district of Hampstead, was included in the Metropolitan returns at the commencement of 1847, for the first time. Therefore the deaths for previous years are not contained in the above table. In the quarters ending March they were respectively (1840) 170, (1841) 158, (1842) 157, (1843) 128, (1844) 171, (1845) 158, (1846) 142.

† Under the head of "sudden deaths" are classed not only deaths described as sudden, of which the cause has not been ascertained or stated; but also all deaths returned by the Coroner in vague terms, such as "found dead," "natural causes," &c., &c.

## PRICES OF

Average Contract Prices of the Provisions and Fuel supplied to the Workhouses

Districts marked out by the Registrar-General, and Central Unions contained therein.	Average Weekly Cost per Head of In-door Paupers.			Wheaten Flour per Stone.	Wheaten Bread per 4 lbs.	Meat—Pork, Beef, and Mutton per lb.	Salt Butter per lb.	Cheese per lb.	Potatoes.
	Food.	Clothing.	Food and Clothing.						
<i>Metropolis.</i>	<i>s. d.</i>	<i>d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>d.</i>	<i>d.</i>	<i>d.</i>	<i>d.</i>	<i>s. d.</i>
East London .....	2 11	2½	3 0½	2 2½	6	5½	9½	...	6 0 cwt.
Holborn .....	2 8½	4½	3 1½	2 6¾	7¾	5½	8¾	4¾	8 0 cwt.
<i>South Eastern Counties.</i>									
Maidstone .....	2 11	1¾	3 0¾	2 2	6½	5	9	5½	...
Stockbridge .....	2 9½	3½	3 0¾	2 2	7	7½	10	6	2 6 bushel.
<i>South Midland Counties.</i>									
Northampton .....	3 0¾	5½	3 6	2 2	5¾	{ 6 6½ }	9½	5½	...
Cambridge .....	2 5¾	7	3 0¾	2 3	6	5½	10	5½	Various.
<i>Eastern Counties.</i>									
Ipswich .....	2 5¾	5½	2 11	2 2	6	6½	10	5½	...
<i>South Western Counties.</i>									
Calne .....	....	....	3 0	2 2	6½	5½	10	5	10 6 sack.
St. Austell .....	2 4	7	2 11	2 4½	6½	5½	....	....	....
Bath .....	2 3	2¾	2 5¾	2 5	6¾	4½	9¾	4¾	12 0 sack.
<i>Western Counties.</i>									
Gloucester .....	2 7½	5½	3 6¾	2 1½	6	5½	{ 10 8 }	5½	25 0 sack.
Wolverhampton .....	3 2½	6½	3 9	2 7	7½	{ 5¾ 5 }	11	6	12 6 bag.
<i>North Midland Counties.</i>									
Bakewell .....	2 5¾	7	3 0¾	2 2	6¾	4¾	12	7	....
<i>North Western Counties.</i>									
Macclesfield .....	2 7½	7	3 2½	2 11	....	6	11¼	6¾	20 0 load.
Blackburn .....	2 5¾	1¾	2 7½	2 11	8¾	4¾	10	7	19 0 240 lbs.
Warrington .....	2 7½	5½	3 0¾	2 0¾	....	....	9	....	....
<i>North Eastern Counties.</i>									
Sheffield .....	2 10¾	2½	3 1	2 5	....	....	10¾	6¾	{ 0 10½ 1 8 }
Huddersfield .....	2 5	2½	2 7½	2 4¾	....	6	12	8	10 0 pack.
Sculcoates .....	2 11	12¼	3 11¼	2 4	6	4¾	13	....	1 2 peck.
<i>Northern Counties.</i>									
Gateshead .....	2 2½	5½	2 8	3 0	7	{ 5½ 4 }	14	6½	....
Kendal .....	2 9½	5½	3 2½	2 9	....	4	11½	6½	1 2 stone.
<i>Wales.</i>									
Pembroke .....	2 4	7	2 11	2 0½	....	{ 6 5½ }	10	4	0 1½ lb.
Holywell .....	2 2½	3½	2 5¾	....	....	....	....	....	....

## PROVISIONS, FUEL, &amp;c.

of the following Unions, during the Quarter ended at Lady-Day, 1847.

Peas per Quart.	Oatmeal per lb.	Candles per 12 lbs.		Yellow Soap.		Coals per Ton.		Tea per lb.	Sugar per lb.	Milk per Quart.	Miscellaneous Articles.
<i>d.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>d.</i>	
3½	1½	4	11	36	9 cwt.	16	5	3	11	4¾	2 Table Beer, 5s. Barrel.
3½	2	6	8	44	0 cwt.	17	11	3	4	4¾	Porter, 33s. Barrel.
....	....	5	9	46	0 cwt.	20	3	3	2	5½	1½ Faggots, 25s. 200.
....	2¾	6	3	0	4½ lb.	28	0	....	....	....	
....	....	6	0	50	0 cwt.	16	0	3	6	5½	1¾ { Rice, 24s. Barley (pearl) 19s.
3¾	1¾	5	3	42	0 cwt.	19	0	3	6	5	2¼ { Soda, 7s. cwt.
											Rice, 3d. lb. Salt, 2s. 6d. cwt.
2¼	2¼	4	10	42	0 cwt.	18	0	....	....	....	
3½	2¼	6	3	0	5¾ lb.	22	6	3	4	5½	.... Legs & Shins of Beef, 1s. 3d. each
3	2¼	5	2	48	0 cwt.	17	2½	5	0	6	.... Rice, 20s. Salt, 2s. cwt.
2½	2½	5	2	40	0 cwt.	12	6	3	3	5¼	....
3½	2½	6	0	40	0 cwt.	{ 12 0 }		3	4	6	.... Rice, 22s. cwt.
						{ 15 0 }					
3½	2¾	{ 6 0 }		46	0 cwt.	10	6	3	6	5½	1 Bacon, 7¾d. lb.
		{ 9 0 }									
3¼	1¾	5	6	0	4¾ lb.	11	0	....	....	....	Rice, 2½d. lb. Soft Soap, 23s. per 6¼ lbs.
2½	2½	6	0	0	4 lb.	10	2	....	....	....	
1½	2½	5	6	45	0 cwt.	....		....	....	....	
4	2	4	9	....		8	6	....	....	....	
3½	2¼	5	0	{ 0 3¾ lb. }		7	0	....	....	....	{ Treacle, 4s. Hominy, 2s. 10d. st.
				{ 0 4 lb. }							Ale and Porter, 1s. 3d. gal.
3¼	2¼	6	6	0	6 lb.	9	0	{ 3 8 }		5¾	2 Cocoa, 8d. Coffee, 1s. 6d. lb.
								{ 5 5 }			Rice, 3s. 6d. Salt, 3d. stone.
3¼	3¼	6	0	0	5 lb.	14	11	....	....	1	
						chaldron.					
1	2¾	5	6	45	6 cwt.	14	6	3	10	5	.... Coffee, 1s. 3d. lb.
3	2¼	6	6	0	5 lb.	15	5	3	10	5½	1 Rice, 3s. 3¾d. st. Coffee, 1s. 2d. lb.
											Treacle, 3s. 7d. Salt, 3d. stone.
4	2¼	5	6	0	5 lb.	15	8	3	9	6	.... Barley, 2d. lb.
....	....	....		....		....		....	....	....	Barley Meal, 11s. 6d. cwt. Porter, 2d. quart

## QUARTERLY METEOROLOGICAL TABLE

Compiled from the Weekly Tables furnished to the Registrar-General by the Astronomer Royal.

1848 Weeks ending	Phases of the Moon.	THERMOMETERS.										WIND.				Rain in inches [7 days.]		Deaths at Three Ages, exclusive of violent and sudden Deaths					
		Mean.					Dew Point.	Self-registering.					In the Water of the Thames at Greenwich by the Self-regis- tering Thermo- meter read at 9 o'clock.	Difference between the dew point temperature and air tem- perature.	Difference of the same week on an average of 25 years.	General Direction.	Greatest pressure in the week.	The amount of Horizontal movement of the air in each week.	Mean amount of Cloud, 0-10.	Rain in inches [7 days.]	Deaths from all causes, exclusive of violent and sudden Deaths.		
		Mean of 12 observations weekly.		Mean of 36 results.	Highest in the Sun.			Lowest on the Grass.															
		Of the Highest on each day, from 6 observations.	Of the lowest on each day, from 6 observations.		During the week.	Mean of 7 observations.		During the week.	Mean of 7 observations.														
Jan.	8 New, Jan. 6th ..	29.627	50.4	27.0	43.5	34.1	9.4	40.3	33.0	27.4	39.0	37.8	37.8	S.	3.0	0.1	500	6.6	0.23	649	404	272	1325
"	15 1st quarter, 13th ..	30.142	47.1	29.1	39.4	32.4	7.0	36.0	34.2	23.0	28.6	36.9	35.7	N.	4.0	0.2	555	8.9	0.40	682	435	303	1422
"	22 Full, 20th .....	29.643	45.7	23.1	36.2	29.6	6.6	32.5	31.4	16.5	24.6	35.3	35.3	Var. & S.W.	6.0	0.2	822	8.6	0.28	538	472	365	1375
"	29 Last qr., 28th .....	29.967	42.8	16.8	31.9	25.9	8.0	29.1	24.7	12.5	20.9	32.9	32.5	E.	5.5	0.7	1030	8.8	0.49	623	438	291	1402
Feb.	5 New, Feb. 5th ..	29.892	52.5	30.3	46.4	36.7	9.7	40.3	37.1	23.0	32.3	35.0	33.6	S.S.W.	4.6	0.7	1515	7.4	0.37	624	467	361	1453
"	12 1st quarter, 11th ..	29.346	53.9	35.0	50.3	40.9	9.4	45.4	40.4	26.0	35.6	42.6	40.3	S.S.W.	13.0	0.9	1745	8.4	0.86	585	411	300	1286
"	19 Full, 19th .....	29.860	53.0	30.2	48.0	36.5	11.5	41.7	36.5	20.0	29.5	43.3	42.2	S.S.W.	4.6	0.6	1235	8.5	0.19	495	367	210	1102
"	26 "	29.083	55.0	31.3	50.9	39.3	11.6	45.0	41.0	24.4	31.7	42.2	41.0	W.S.W.	7.0	1.4	1970	7.9	0.74	516	372	262	1090
Mar.	4 Last qr., 27th .....	29.325	54.0	29.0	48.6	37.4	11.2	43.1	36.5	26.0	31.2	45.5	44.1	S.W. & N.	11.0	1.1	1770	7.0	0.33	491	356	217	1086
"	11 New, Mar. 5th ..	29.579	54.5	29.3	48.2	35.5	12.7	41.7	37.0	27.5	33.7	43.0	41.0	S.W.	9.0	0.5	1415	8.4	0.32	594	332	197	1033
"	18 1st quarter, 13th ..	29.379	55.1	32.0	48.6	35.1	13.5	40.7	36.4	25.9	29.6	42.0	41.0	Variable	4.0	0.3	690	9.1	0.31	491	373	212	1077
"	25 Full, 19th .....	29.468	53.8	29.4	52.7	37.5	15.2	44.7	39.0	27.0	31.1	44.0	41.0	Variable	4.5	0.6	1165	7.0	0.63	496	353	214	1054
April	1 Last qr., 28th ..	29.727	53.0	26.2	51.7	43.0	18.7	51.2	45.9	29.5	33.2	46.0	43.0	S.	1.5	0.1	470	6.7	0.51	537	401	217	1155
Mean, Highest, or Lowest of the 13 weeks.		29.615	73.0	16.8	46.8	35.7	11.1	40.9	36.5	29.5	33.3	43.1	43.1	13.0	0.6	1147	7.9	0.43	7281	5231	3301	15870	

\* The ages of 57 were not specified in the Returns.

+ Deaths enumerated under the heads "violent" and "sudden," chiefly consist of cases returned by the Coroner, many of which are registered, not when they occur, but at uncertain periods; and they are, therefore, excluded from this comparison of weeks.

+ Mean of the first nine weeks.

# REMARKS ON THE WEATHER DURING THE QUARTER ENDING MARCH 31st, 1848.

By JAMES GLAISHER, Esq., of the Royal Observatory, Greenwich.

THE weather during the past quarter has been remarkable in many respects. The daily temperature of the air has for the most part been above the average, yet there was a period of exceedingly cold weather between the 20th and the 28th of January; the departures from the average on the 26th, 27th, and 28th, were  $12^{\circ}8$ ,  $10^{\circ}8$ , and  $16^{\circ}$  respectively. The temperature then suddenly increased to  $6^{\circ}5$  above the average on the 30th; and for the most part the daily values afterwards exceeded those of the average, or differed very little from them.

It may perhaps tend to clearness if I speak of each subject of investigation separately.

The mean temperature of the air at Greenwich for the month of January was  $34^{\circ}6$ , which is  $1^{\circ}7$  above that of 1842;  $4^{\circ}5$ ,  $3^{\circ}7$ ,  $9^{\circ}1$ , and  $0^{\circ}5$  below those in the years 1842 to 1847 respectively, or it is  $3^{\circ}8$  below the average of these six years; for the month of February was  $43^{\circ}4$  which is  $2^{\circ}6$ ,  $7^{\circ}4$ ,  $8^{\circ}2$ ,  $10^{\circ}7$ , above those of the years 1842 to 1845 respectively,  $0^{\circ}5$  below that in 1846, and  $8^{\circ}0$  below that of 1847, or it is  $2^{\circ}6$  above the average of these six years; for the month of March was  $43^{\circ}8$ , which is  $1^{\circ}1$  below that of 1842;  $0^{\circ}9$ ,  $2^{\circ}3$ ,  $8^{\circ}6$ ,  $0^{\circ}5$ , and  $2^{\circ}8$  above those of the years 1843 to 1847 respectively; or it is  $2^{\circ}3$  above the average of these six years.

The mean value for the quarter was  $40^{\circ}6$ ; that for 1841 was  $38^{\circ}4$ ; for 1842 was  $39^{\circ}5$ ; for 1843 was  $39^{\circ}6$ ; for 1844 was  $38^{\circ}5$ ; for 1845 was  $35^{\circ}4$ ; for 1846 was  $43^{\circ}6$ ; and for 1847 was  $37^{\circ}2$ ; so that the excess for this quarter above the corresponding quarter in the years 1841, 1842, 1843, 1844, 1845, and 1847, were  $2^{\circ}2$ ,  $1^{\circ}1$ ,  $1^{\circ}0$ ,  $2^{\circ}1$ ,  $5^{\circ}2$ , and  $3^{\circ}4$  respectively; the only year between 1841 and 1847 whose mean temperature for this period exceeded that of the present year was 1846; the excess of the period in this year exceeded that of the corresponding period of 1848 by  $3^{\circ}0$ . The average value for this quarter from the seven preceding years was  $38^{\circ}9$ , so that the mean temperature of the air for the past quarter exceeds that of the corresponding quarter in the seven preceding years by  $1^{\circ}7$ . This excess is remarkable, from the circumstance of the mean temperature of the preceding quarter being in excess to the large amount of  $3^{\circ}4$ , so that the temperature of the period between 1847, September 30, and 1847, March 31, exceeds the average by  $2^{\circ}55$ .

The mean temperature of the evaporation at Greenwich for the month of January was  $32^{\circ}6$ , which is  $4^{\circ}7$  below that for the preceding six years; for the month of February was  $41^{\circ}6$ , which is  $5^{\circ}8$  above that for the preceding six years; for the month of March was  $41^{\circ}6$ , which is  $2^{\circ}2$  above that for the preceding six years.

The mean value for the quarter was  $38^{\circ}6$ , which is  $1^{\circ}1$  above that for the corresponding period of the preceding six years.

The mean temperature of the dew-point at Greenwich for the month of January was  $31^{\circ}7$ , which is  $1^{\circ}7$ , above that for 1842;  $5^{\circ}6$ ,  $4^{\circ}4$ ,  $4^{\circ}2$ ,  $9^{\circ}1$  and  $1^{\circ}9$  below those of the years 1843 to 1847 respectively, or it is  $3^{\circ}9$  below the average of these six years; for the month of February was  $38^{\circ}8$ , which is  $0^{\circ}4$ ,  $5^{\circ}4$ ,  $7^{\circ}0$ ,  $10^{\circ}3$ , above those of the years 1842 to 1845,  $1^{\circ}1$  below that of 1846, and  $7^{\circ}8$  above that of the year 1847, or it is  $5^{\circ}0$  above the average for these years; for the month of March was  $38^{\circ}5$ , which is  $2^{\circ}2$  and  $0^{\circ}4$  below those of the years 1842 and 1843,  $1^{\circ}9$ ,  $8^{\circ}5$ ,  $0^{\circ}2$ , and  $5^{\circ}0$  above those of the years 1844 to 1847, respectively, or it is  $2^{\circ}2$  above the average value for these six years.

The mean value for the quarter was  $36^{\circ}3$ , which is  $1^{\circ}1$  above the average for the six preceding years.

The mean weight of water in a cubic foot of air for the quarter was 2.7 grains, which is of the same value as that of the average for the six preceding years.

The additional weight of water required to saturate a cubic foot of air was 0.47 grain; the average for the six preceding years was 0.36 grain.

The mean degree of humidity of the atmosphere for January was 0.837, for February was 0.864, and for March was 0.839; these values being less than the average for the six preceding years by 0.077, 0.029, and 0.002 respectively; the value for the quarter was 0.846, which is 0.036 less than the average for these years.

The mean elastic force of vapour for the quarter was 0.230 inch, which is 0.006 inch above the average for the six preceding years.

The mean reading of the barometer at Greenwich for January was 29.816 inches, for February was 29.517 inches, and for March was 29.505 inches; these values are

0·057 inch above, 0·199 inch below, and 0·256 inch below respectively, the averages for the seven preceding years. The mean value for the quarter was 29·613 inches which is 0·132 inch below the average for these years. The readings of the barometer during the greater part of the quarter were remarkable, and will be spoken of presently.

The average weight of a cubic foot of air under the average temperature, humidity, and pressure, was 545 grains; the average for the six preceding years was 549 grains.

The rain fallen at Greenwich in January was 1·2 inches; in February was 2·6 inches; and in March was 3·1 inches; the average values for the seven preceding years were 1·9 inches, 1·6 inches, and 1·4 inches respectively. The total amount fallen in the quarter was 7·9 inches, which is 3·0 inches greater than the average for the years 1841 to 1847. I shall presently speak of this large amount of rain.

The temperature of the Thames water was 39°3 by day, and 37°0 by night. The water, on an average, was 2°4 warmer than the air.

The horizontal movement of the air was about 168 miles daily, being somewhat more than its average value.

The highest and lowest readings of the thermometer in air at the height of four feet above the ground, and protected as much as possible from the effects of radiation and rain, were 71°5 and 15°8.

The average daily range of the readings of thermometers in air at the height of four feet, was 11°1, which is 0°8 greater than the average range for the seven preceding years.

In January the readings of the thermometer on grass were at or below 32° on 27 nights, and the lowest reading was 12°5. In February it was at or below 32° on 14 nights, and the lowest reading was 20°. In March it was at or below 32° on 21 nights, and the lowest reading was 18°. These low readings have generally taken place at times when the sky has suddenly become clear, and for the most part their periods of continuance have been short, as the amount of clear sky at night during the quarter has been small. The observer at Durham says, that on the night of January 19, the reading of a thermometer on grass fell below zero.

The mean amount of cloud for the quarter was such as to cover, upon the average, four-fifths of the whole sky. The amount of cloud during the period from 1847, November 30, to 1848, March 31, was larger than in any period of equal length for many years.

The electricity during the past quarter at Greenwich has been about its usual amount at this period of the year. At Kew, the amount has been at all times very much larger than at Greenwich, and there does not appear to have been any period during which the instruments were unaffected.

During the quarter there were five exhibitions of the Aurora Borealis, which occurred on the following days, viz., February 20, 22, March 19, 20, and 31. At these times the magnets were disturbed.

It appears that the great fluctuations of the readings of the barometer have been general.

The unusual meteorological character of the period which we have just experienced, together with its influence on the public health, makes it an object of general interest to trace the cause of so remarkable a phenomenon. To enable persons who have time at their disposal for this investigation, I have detailed the principal meteorological facts for England for the period, and which may be briefly mentioned as exhibiting an excess of temperature for the six months ending 1848, March 31, of 2°55 upon the average for the same period from the seven preceding years. An excess remarkable both for its amount and continuance. During the past quarter, the amount of water mixed with the air has been about its average value, although in consequence of the high temperature, the humidity of the air has been less. We have had an unusual prevalence of S.W., W.S.W., and S.S.W. winds at this season, when they are usually replaced by dry and cold N. and N.E. winds. The air has been in frequent rapid motion, and during the period between January 22 and March 4, it passed over Greenwich at the rate of 220 miles daily.

The barometer readings have been remarkable for great and frequent oscillations and very low readings, exhibiting a difference in these particulars from any period since the year 1800 (records previous to this date I have not examined). The amount of rain in March was very nearly double its usual amount; and that for the quarter exceeds the average, reckoned from 1815 to the present time, by 2½ inches. The water-sodden state of the soil, in many parts, has prevented wheat sowing, and following the land at the proper season.

QUARTERLY METEOROLOGICAL TABLE.

NAMES OF THE PLACES.	Mean Pressure of the Atmosphere of Dry Air reduced to the level of the Sea.	Mean Temperature of the Air.	Highest Reading of the Thermometer.	Lowest Reading of the Thermometer.	Mean Daily Range of Temperature.	Range of the Ther- mometer.	WIND.		Mean amount of Cloud 0-10.	RAIN.		Mean Weight of Va- pour in a Cubic Foot of Air.	Mean additional weight required to saturate a cubic Foot of Air.	Mean Degree of Hu- midity.	Mean whole Amount of Water in a Ver- tical Column of Atmosphere.	Mean Weight of a Cubic Foot of Air.	Height of station or the Barometer above the level of the Sea.
							Strength 0-6.	Direction.		Number of Days on which it fell.	Amount Col- lected.						
Helston.....	In. 29.542	42.4	61.0	24.0	9.0	37.0	1.5	S.W.	6.4	67	12.7	3.1	0.4	0.877	3.7	542	106
Falmouth.....	.. 29.542	42.2	62.0	27.0	10.0	35.0	1.8	W.S.W.	7.3	60	13.9	3.1	0.6	0.843	3.7	540	..
Truro.....	.. 42.2	56.0	26.0	8.1	30.0	1.0	2.5	Variable	7.3	60	14.7	..	..	..	..	..	120
Torquay.....	.. 43.1	57.0	26.0	7.1	31.0	..	1.2	N.	..	52	9.3	3.0	0.4	0.870	3.6	..	140
Exeter.....	.. 40.5	63.8	19.0	11.0	44.8	..	..	S.W.; N.E.	6.4	57	9.5	2.5	..	0.888	3.0	549	60
Brighton.....	.. 29.549	37.7	55.0	15.0	5.1	49.0	..	S.W.; N.E.	..	..	..	..	..	..	..	..	..
Chichester.....	.. 38.7	62.0	13.0	10.9	40.0	..	..	S.W.; N.E.	..	..	..	..	..	..	..	..	..
Southampton.....	.. 29.526	39.6	67.0	11.0	10.5	56.0	..	S.W.	..	..	..	..	..	0.880	3.3	545	180
Uckfield.....	.. 29.516	38.6	70.0	19.0	12.4	51.0	1.3	S.W.	7.1	58	9.5	2.9	0.3	0.969	3.4	545	265
Beckington.....	.. 29.582	39.5	71.5	15.8	11.1	55.7	..	S.W.	8.0	49	7.9	2.7	0.5	0.847	3.2	545	159
Royal Observatory Greenwich.....	.. 29.562	40.4	67.3	16.8	8.6	50.5	..	S.W.	7.8	52	7.5	2.8	0.3	0.889	3.4	546	107
Maidenstone Hill, Greenwich.....	.. 40.0	71.5	17.0	10.6	54.5	..	..	..	7.9	..	..	2.8	0.3	0.889	3.4	..	40
Lewisham.....	.. 29.464	40.6	69.0	18.0	8.0	51.0	3.5	S.W.	8.2	..	6.2	2.8	0.4	0.855	3.3	543	32
Waltham.....	.. 40.5	37.7	67.0	16.0	12.7	51.0	1.1	Variable	7.7	53	7.6	2.8	0.3	0.914	3.4	544	..
St. John's Wood, London.....	.. 29.527	38.6	65.0	15.0	12.2	50.0	0.8	S.	7.5	50	6.8	2.8	0.3	0.913	3.3	542	300
Latimer Rectory.....	.. 29.448	38.4	68.0	16.5	11.8	51.0	1.2	S.W.	7.2	45	8.7	2.6	0.4	0.862	3.1	540	280
Aylesbury.....	.. 29.557	39.2	61.0	16.0	16.0	45.0	1.1	Variable	7.1	..	..	2.9	0.1	0.975	3.4	544	300
Stone Observatory.....	.. 38.5	66.0	19.0	10.7	47.0	3.4	..	..	6.3	60	6.7	2.6	0.3	0.862	3.1	..	..
Hartwell House.....	.. 39.4	55.5	23.0	..	32.0	..	..	S.W.	6.6	32	10.5	2.8	0.3	0.909	3.3	546	..
Sutton Walden.....	.. 38.4	60.0	18.0	10.3	42.0	..	..	S.W.	6.6	46	6.6	2.8	0.3	0.909	3.3	546	..
Pool Cottage, Hereford.....	.. 39.9	68.0	15.0	9.3	53.0	..	..	S.E. & S.W.	..	40	7.2	2.6	0.7	0.802	3.1	545	200
Cardington.....	.. 39.9	68.0	15.0	9.3	53.0	..	..	S.W. & N.W.	..	51	6.2	2.6	0.4	0.902	3.3	541	39
Thwaite.....	.. 29.537	38.2	66.0	17.0	11.0	49.0	..	S.W. & N.W.	..	56	11.8	2.7	0.7	0.882	3.2	541	..
Norwich.....	.. 29.472	38.6	61.0	11.0	11.8	50.0	..	S.W. & N.W.	7.5	71	8.4	2.7	0.4	0.872	3.1	548	163
Derby.....	.. 29.528	39.8	69.8	16.0	9.4	53.8	2.0	S.W. & N.W.	6.3	52	7.9	2.6	0.4	0.892	3.2	545	37
Highfield House, Notts.....	.. 29.516	41.2	54.5	20.7	6.4	53.8	1.2	W.	..	..	..	2.7	0.3	0.892	3.1	545	113
Liverpool Observatory.....	.. 29.526	39.5	61.0	12.0	9.6	50.0	0.5	W.S.W.	8.0	57	15.0	2.6	0.3	0.898	3.1	539	381
Wakfield.....	.. 29.449	37.7	61.0	11.0	11.3	52.0	..	S.W. & N.E.	..	..	..	2.9	0.1	0.979	3.4	545	148
Stonyhurst Observatory.....	.. 29.512	37.2	57.0	6.0	12.7	51.0	0.4	N.W. & S.E.	..	63	9.5	2.7	0.2	0.931	3.2	..	50
Leeds.....	.. 37.2	61.0	15.0	9.3	46.0	..	..	N.W. & S.E.	8.5	45	10.9	2.7	0.2	0.983	3.3	543	162
York.....	.. 37.8	56.2	23.0	7.0	33.2	1.7	..	S.W.	..	58	16.1	2.7	0.3	0.964	3.0	544	340
Drumargal House, Scarva, Ireland.....	.. 40.1	55.5	15.0	8.8	40.5	2.2	..	S.W.	6.4	39	7.5	2.6	0.1	0.964	3.0	544	..
Whitehaven.....	.. 29.483	37.6	57.2	3.8	8.8	53.4	1.9	S.W.	..	..	..	2.8	0.2	0.939	3.0	544	121
Durham.....	.. 29.483	37.6	57.2	3.8	8.8	53.4	1.9	S.W.	..	..	..	2.8	0.2	0.939	3.0	544	..
Newcastle.....	.. 29.435	38.6	58.5	9.5	10.0	49.0	..	S.W.	..	41	11.8	2.8	0.2	0.939	3.0	544	..
Number of Columns.....	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17

From the numbers in the first column it seems that the volume of dry air was the same at all parts of the country. The mean of all these results is 29.512 inches, and this value may be considered as the pressure of dry air for England during the quarter ending March 31, 1848.

From the numbers in the second column, we find for the quarter ending March 31, 1848, that the mean temperature of the air for the counties of Cornwall and Devonshire was 42°1, and for the remaining places, excepting Brighton, Liverpool, and Whitehaven, was 38°9.

The average daily range of the temperature of the air in Cornwall and Devonshire was 9°2; at Brighton, Liverpool, and Whitehaven was 6°7; that at Brighton was 5°1 only, and seems to be too small; at places situated between the latitudes of 51° and 53° was 11°0, except at London, where the range was 8°9 only; and at all places N. of 53°, was 10°3.

The greatest mean daily ranges took place at Hartwell, Latimer, Leeds, Beckington, Aylesbury, &c., and the least occurred at Brighton, Liverpool, Scarva, Torquay, &c.

The highest reading during the quarter was at Greenwich and Lewisham, which was 71°5, and the lowest was at Durham, which was 3°8. The extreme range of temperature in England, during the quarter, was therefore 67°7.

The average quarterly range of the reading of the thermometer in Cornwall and Devonshire was 35°6; at Brighton, Liverpool, and Whitehaven, was 38°1; at those places situated between the latitudes of 51° and 52° was 51°3; and between the latitudes of 52° and 55° was 48°3.

The mean direction of the wind was S.W. At Exeter it was N., but this is probably wrong.

From the numbers in the ninth column the distribution of cloud seems to have been the same in amount nearly at all parts of the country, and such as to have covered about three-fourths of the sky. The actual amount I believe to have been greater than three-fourths.

The fall of rain during the quarter has greatly exceeded the average amount for the season, and it has fallen on a greater number of days than usual. At Highfield House, it fell on 71 days; at Helston, on 67; at Leeds, on 63; at Falmouth, Truro, and Saffron Waldon, each 60. The places at which rain fell on the least number of days were Hereford, Durham, Thwaite, Newcastle, &c. The places at which the largest falls have taken place, are Whitehaven, Stonyhurst, Truro, Falmouth, Helston, Derby, Newcastle, &c.; and the places where the fall has been the least in amount, are Walworth, Cardington, Saffron Walden, &c., generally the fall has been much smaller on the E. coast than on the W. coast. The average amount for the quarter in Cornwall and Devonshire, was 12 inches, at places situated between 51° and 53° was 8.2 inches, and at places N. of 53° was 10.7 inches.

Columns 12 to 16 contain the mean hygrometrical results, and they are as nearly identical as can be expected from uncomparated instruments. At Beckington, the air seems to have been near saturation. At Hartwell, the results cannot be correct; these instruments, however, are to be shortly compared with standards. At Leeds the results are evidently erroneous, the instruments here are to be replaced by new ones. Omitting the results from these places, we find that

The mean weight of vapour in a cubic foot of air for England (excepting Cornwall and Devonshire) in the quarter ending March 31, 1848, was 2.7 grains.

The mean additional weight required to saturate a cubic foot of air in the quarter ending March 31, 1848, was 0.3 grains.

The mean degree of humidity in the quarter ending March 31, 1848, was 0.888.

The mean amount of vapour mixed with the air would have produced water, if all had been precipitated at one time on the surface of the earth, to the depth of 3.25 inches in the quarter ending March 31, 1842.

And these values for Cornwall and Devonshire were 2.7 grains; 0.5 grain; 0.863 gr.; and 3.6 inches

The results from the station in Ireland, depending on the temperature of the air, the direction of the wind, and the amount of clouds, agree with those in England at the same latitude; but the results which depend on the humidity of the air, and the amount of rain, exhibit an excess over those in England, and the daily and monthly ranges of the readings of the thermometer are less than those in England.

## REVENUE.

*Abstract of the Net Produce of the Revenue of Great Britain in the Years and Quarters ending 5th July, 1847 and 1848; showing the Increase or Decrease thereof.—(Continued from page 189.)*

Sources of Revenue.	Years ending 5th July.			
	1847.	1848.	Increase.	Decrease.
	£	£	£	£
Customs.....	18,792,348	17,888,988	....	903,360
Excise.....	12,733,998	12,263,233	....	470,765
Stamps.....	7,201,797	6,449,108	....	752,689
Taxes.....	4,325,732	4,306,703	....	19,029
Property Tax.....	5,491,936	5,411,253	....	80,683
Post Office.....	854,000	787,000	....	67,000
Crown Lands.....	112,000	71,000	....	41,000
Miscellaneous.....	307,621	230,201	....	77,420
Total Ordinary Revenue ....	49,819,432	47,407,486	....	2,411,946
China Money.....	227,644	455,021	227,377	....
Imprest and other Moneys ..	208,190	187,408	....	20,782
Repayments of Advances....	804,843	422,485	....	382,358
Total Income.....	51,060,109	48,472,400	227,377	2,815,086
	Deduct Increase .....			227,377
	Decrease on the Year .....			2,587,709

Sources of Revenue.	Quarters ending 5th July.			
	1847.	1848.	Increase.	Decrease.
	£	£	£	£
Customs.....	4,519,119	4,447,892	....	71,287
Excise.....	3,291,052	3,473,803	182,751	....
Stamps.....	1,869,464	1,557,640	....	311,824
Taxes.....	2,075,001	2,034,133	....	40,868
Property Tax.....	1,036,517	988,401	....	48,116
Post Office.....	215,000	136,000	....	79,000
Crown Lands.....	....	10,000	10,000	....
Miscellaneous.....	7,461	89,022	81,561	....
Total Ordinary Revenue ....	13,013,614	12,736,831	274,312	551,095
China Money.....	....	....	....	....
Imprest and other Moneys ..	88,632	88,805	173	....
Repayments of Advances....	137,944	86,813	....	51,131
Total Income.....	13,240,190	12,912,449	274,485	602,226
	Deduct Increase .....			274,485
	Decrease on the Quarter .....			327,741

*Consolidated Fund Operations.*—The total income brought to this account in the quarter ending 5th July, 1848, was 12,923,875*l.* The total charge upon it was 7,096,140*l.*, leaving a surplus of 5,827,735*l.* The amount of Exchequer Bills issued to meet the charge on the Consolidated Fund for the quarter ending 5th April, 1848, and paid off out of the growing produce of that fund for the quarter ending 5th July, 1848, was 1,435,398*l.*

The probable amount of Exchequer Bills required to meet the charge on the Consolidated Fund in the quarter ending 5th July, 1848, is stated at 1,471,282*l.*

## CORN.

*Average Prices of Corn per Imperial Quarter in England and Wales, during each Week of the Second Quarter of 1848; together with the Average Prices for the whole Quarter.—(Continued from p. 190.)*

Returns received at the Corn Office, 1848.		Wheat.		Barley.	Oats.	Rye.	Beans.	Peas.
		Weekly Average	Aggregate Average of six Weeks regulating Duty.	Weekly Average	Weekly Average	Weekly Average	Weekly Average	Weekly Average
Weeks ending 1848.		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
April	1 .....	51 10	50 7	35 5	20 2	29 8	35 7	36 4
	8 .....	51 6	50 10	32 2	19 7	29 6	35 3	38 3
	15 .....	49 7	50 9	32 2	19 11	28 10	35 6	36 11
	22 .....	48 10	50 7	32 1	19 8	29 7	35 3	38 2
	29 .....	49 6	50 5	31 10	19 8	29 0	34 9	37 6
May	6 .....	50 1	50 3	32 4	19 8	31 11	35 7	36 3
	13 .....	49 10	49 11	32 8	20 2	29 10	35 6	35 9
	20 .....	48 4	49 4	32 7	20 4	29 2	36 3	35 9
	27 .....	47 8	49 1	32 8	20 8	28 9	36 9	36 11
June	3 .....	48 1	48 11	31 8	21 0	30 8	37 10	38 0
	10 .....	47 8	48 7	31 7	20 9	28 0	38 4	37 0
	17 .....	46 10	48 1	30 10	20 8	31 7	37 8	38 0
	24 .....	46 11	47 7	31 2	20 9	29 4	36 11	38 4
Average of the Quarter }		48 11	49 7	32 3	20 3	29 8	36 3	37 2

*Foreign and Colonial Wheat and Wheat-Flour imported in each of the Months ending 5th April, 5th May, and 5th June, 1848; the Quantities Entered for Home Consumption during the same Months; and the Quantities remaining in Warehouse at the close of them.—(Continued from p. 190.)*

## WHEAT.

Months ending.	Imported.			Entered for Home Consumption.			In Bond at the Month's end.		
	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.
1848	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.
5th April	100,601	1,174	101,778	83,334	1,171	84,508	17,186	..	17,186
5th May	137,255	490	137,745	115,644	450	116,094	37,223	40	37,263
5th June	143,192	861	144,053	120,810	661	121,474	56,703	237	56,940

## WHEAT-FLOUR.

Months ending.	Imported.			Entered for Home Consumption.			In Bond at the Month's end.		
	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.
1848	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.
5th April	26,975	1,189	28,161	26,268	1,190	27,458	1,141	..	1,141
5th May	16,631	1,087	17,721	10,629	874	11,503	6,654	213	6,867
5th June	4,709	10	4,719	6,875	224	7,099	4,471	..	4,471

## CURRENCY.

## BANK OF ENGLAND.

*An Account, pursuant to the Act of the 7th and 8th Victoria, c. 32, for the Weeks ending on Saturday, the 1st April, the 29th April, the 27th May, and the 24th June, 1848.—(Continued from p. 191.)*

## ISSUE DEPARTMENT.

	Weeks ending,			
	1st April, 1848.	29th April, 1848.	27th May, 1848.	24th June, 1848.
	£	£	£	£
Notes issued .....	28,542,735	26,261,825	26,743,610	27,536,565
Government Debt ....	11,015,100	11,015,100	11,015,100	11,015,100
Other Securities .....	2,981,900	2,984,900	2,984,900	2,984,900
Gold Coin and Bullion..	12,648,784	10,556,203	11,338,612	12,131,567
Silver Bullion .....	1,893,951	1,705,622	1,404,998	1,404,998
Total .....	28,542,735	26,261,825	26,743,610	27,536,565

## BANKING DEPARTMENT.

Proprietors' Capital....	14,553,000	14,553,000	14,553,000	14,553,000
Rest .....	4,001,315	3,408,200	3,391,979	3,400,930
Public Deposits .....	7,140,125	2,283,391	4,866,035	6,600,957
Other Deposits.....	9,580,384	11,049,918	9,135,479	8,853,600
Seven Day and other Bills	926,002	1,080,591	1,032,232	1,010,888
Total .....	36,200,856	32,375,100	32,978,725	34,419,375
Government Securi- ties, including Dead Weight Annuities.. }	11,721,566	12,034,028	11,751,215	12,411,301
Other Securities .....	12,936,289	12,065,481	11,524,726	11,229,195
Notes .....	10,874,870	7,658,750	8,931,655	10,007,630
Gold and Silver Coin ..	668,131	616,841	771,129	771,249
Total .....	36,200,856	32,375,100	32,978,725	34,419,375

## COUNTRY BANKS.

*Average Aggregate Amount of Promissory Notes of Country Banks, which have been in Circulation in the United Kingdom, distinguishing the several Banks, or Classes of Banks by which issued in each part of the Kingdom, during the weeks ending 26th February, 25th March, and 22nd April, 1848.—(Continued from p. 191.)*

Banks.	26th Feb., 1848.	25th March, 1848.	22nd April, 1848.
England—Private Banks .....	3,633,141	3,598,279	3,852,129
Joint Stock Banks .....	2,512,059	2,572,343	2,764,210
Scotland—Chartered, Private, and Joint Stock Banks..... }	3,032,320	2,951,937	2,931,171
Ireland—Bank of Ireland.....	3,069,500	2,990,875	2,988,400
Private and Joint Stock Banks..... }	2,150,580	2,116,520	2,020,633
Total.....	14,397,600	14,229,954	14,559,543

## BANKRUPTCY.

*An Analysis of the Bankruptcies in England and Wales, gazetted in each Month of the Quarter ending June 30, 1848; showing the Counties and Branches of Industry in which they have occurred.—(Continued from p. 192.)*

COUNTIES.	April.	May.	June.	TRADES.	April.	May.	June.
Metropolis.....	55	42	38	<i>Agriculture and connected Trades.</i>			
Bedford .....				Farmers .....	2	2	3
Berks .....	1	3	2	Agricultural Implement Makers, &c. ....	1	1	1
Bucks. ....	1	1		Corn Factors .....	2	3	1
Cambridge .....	1	4	3	Millers and Malsters .....	1	1	
Cheshire .....	1		1	Hop Merchants .....			
Cornwall .....		2	1	Brewers .....	1	2	6
Cumberland .....				Horse and Cattle Dealers, and Woolstaplers .....	6	6	
Derby .....	1	1		<i>Mining and connected Trades.</i>			
Devon .....	11	6	4	Mining Firms .....			1
Dorset .....	1	2	1	Blasting Works .....		1	2
Durham .....	3	6	2	<i>Manufactures.</i>			
Essex .....	4	4		Woollen Manufacturers .....	5	4	4
Gloucester .....	6	6	4	Cotton „ .....	2	1	3
Hants. ....	3	4	2	Linen „ .....		2	4
Hereford .....		3		Silk „ .....	1	1	1
Hertford .....		2	1	Printers and Dyers .....			2
Huntingdon .....		2	1	Lace Manufacturers .....		1	4
Kent .....	1			Hosiery „ .....	2	5	3
Lancashire.....	31	17	23	Hardware „ .....	10	6	8
Leicester .....	1			Earthenware „ .....	3	5	1
Lincoln .....		3		Glass „ .....	1		
Middlesex (exclusive of the Metropolis) }	1	1	6	Paper „ .....		4	3
Monmouth.....	5	1		Builders .....	10	9	9
Norfolk .....	3	4	7	Miscellaneous Manufacturers.....	20	14	14
Northampton .....				<i>Commerce.</i>			
Northumberland .....	5	2	4	Bankers and Merchants .....	21	14	10
Nottingham .....	3	7	4	Shipowners, Warehousemen, Brokers, and Wholesale Dealers generally .....	8	4	4
Oxford .....	1	4	2	<i>Retail and Handicraft Trades.</i>			
Rutland .....		1	2	Bakers .....	2	5	3
Salop .....	2		1	Butchers .....	2	6	4
Somerset (including Bristol) }	11	13	6	Corn and Hay Dealers .....		3	2
Stafford .....	4	2		Innkeepers and Victuallers .....	14	11	12
Suffolk .....	6	4	3	Wine and Spirit Merchants .....	7	6	
Surrey (exclusive of the Metropolis) }	2		9	Dealers in Grocery, Drugs, and Spices .....	20	12	7
Sussex .....	2	1	1	Makers of, and Dealers in, Clothing .....	22	14	7
Warwick .....	3		3	Makers of, and Dealers in, Furniture .....	4	2	5
Westmoreland .....			2	Coach Builders .....	1	4	2
Wilts .....	2	4	1	Miscellaneous .....	31	22	18
Worcester .....			1				
York (East Riding) .....		2	2				
„ (North Riding) .....		3	1				
„ (West Riding) .....	18	10	9				
Wales .....	4	4	3				
Total .....	192	171	150	Total.....	192	171	150

# QUARTERLY JOURNAL

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## STATISTICAL SOCIETY OF LONDON.

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*On the Subdivision of Real Property and its effects upon Agriculture and the Produce of the Soil in France, shown by the facts adduced in the recent Work of MM. Monnier and Rubichon.* By The Right Hon. THE EARL LOVELACE

[Read before the Statistical Society of London, 19th June, 1848.]

MORE than half a century back our countryman, Arthur Young, published an agricultural account of France, derived from observations he had personally made in the course of his journeys through that country. There were then neither cadastre, surveys, nor statistical authority of any kind worth notice; and for his estimate of her produce and resources, the author was obliged to rely, first, on his own experienced *coup d'œil*; then, on such information as he could obtain from persons of rank or office in the different provinces; lastly, on calculations deduced from these imperfect data. The numbers of the population were better known, and their general estimated consumption of food per head afforded him the means of checking his view of the total produce of the country, which, in good seasons, he reckoned to be above its wants. Some idea of the difficulties of even an approximate notion of the respective spaces occupied by certain cultures on soils in certain districts may be gathered from the fact that, in Young's book, the extent of some of them is actually calculated by *weight*, and not by measure. Having constructed a skeleton map of the country, on paper of uniform thickness and substance, and marked thereon what, in the course of his travels, had been pointed out to him as mountains, sands, loams, and chalks, this sagacious writer proceeded to cut out and weigh, and ascertain by a rule of three sums, the extent of each due to their proportionate number of grains. This operation afforded him 25,513,213 acres of heathy land or waste. The real quantity now, under the official returns, is 22,701,757 acres; and the small difference between the two results is the more remarkable when we contrast the extreme simplicity of the process adopted by Young, with the laborious investigations of the cadastre. And if, as is probably the case, since 1790, any quantity of the heath lands have been brought into cultivation, from the increase of population, the difference is still further reduced.

With such unavoidable and certainly venial mistakes, Young continued long the only trustworthy authority on such matters among the

French themselves; and even at the present day his statistics concerning their country are quoted with great reliance on their correctness, by their writers on agricultural economy, and among them by the authors at the head of this article.

MM. Rubichon and Monnier have undertaken in this work a very careful examination, not only of the official documents connected with the inheritance, occupation, and produce of the land in France, published by the Government, but they have also directed, for the purpose of comparison, an equally patient and laborious attention to the parliamentary documents and other information afforded by our own Blue Books in England during the last ten or fifteen years. M. Monnier, the nephew, was active as an artillery officer under Don Carlos, in the North of Spain. M. Rubichon, the uncle, is a gentleman now far advanced in life, whose strong prepossessions in favour of the older order of things in France, have no more blinded him to the train of errors committed by the restored Bourbons, than to the despotism of Buonaparte, or the shortcomings of the *royauté consentie* of Louis Philippe.

France appears to have had no statistical account of her territory and productions until the reign of her late sovereign. In that of Louis XIV., Vauban had undertaken a kind of inductive calculation. Observing in some of the provinces of the west the proportions that vines, pastures, arable lands, and woods, gardens, and communes bore to each other, the Marshal proceeded to reckon the quantities thus occupied throughout the kingdom from these various and necessarily erroneous data. The *économistes* of the subsequent reign, who bestowed a particular and almost exclusive attention upon agriculture, contented themselves with arguing on the conclusions to be drawn from a basis which had never received the least official verification. The National Assembly, in 1790, charged the celebrated Lavoisier with the task of assessing the land-tax, then imposed, on a correct and just principle. Lavoisier was a farmer-general; a man of business as well as of science, he united the experience of office to the exactness of mathematical theory. Yet so little was understood in those days of the nature of the inquiry committed to him, or of the proper method of conducting it, that he founded all his valuations on the number of ploughs ascertained to be kept. This shows, at least, how forlorn and incorrect were the notions of some of the ablest men of the time upon this subject. The mathematician, Lagrange, two years after Lavoisier, than whom he was in some respects better qualified, became already aware that considerable errors had been admitted into the calculations of his predecessor. His own supposition was, that the annual consumption of the kingdom was 511·36 lbs. of corn, and 146 lbs. of meat per head; in all, 657·36 lbs., being one-fifth less than the soldier's ration for the whole population. Another estimate he drew from the *octroi* returns of towns at whose gates the provisions pay a tax on entry. This afforded him an allowance per head of 583·35 lbs. of corn, and 80 lbs. of meat, or in all 663·35 lbs.; the general proportion being of the former to the latter as 7 to 2: while at Paris it was as 21 to 10, and in the manufacturing towns (which were the least well fed) as 15 to 2. Lagrange's estimate is evidently too high: the comparative consumption of all the towns would be much increased by the number of travellers, whether posting or in diligences, whose meals would demand

an additional introduction of provisions, and swell the apparent portion of each inhabitant of them.

All this, however, was mostly guess work. In 1810 Napoleon gave orders for a general statistical account of his empire, to be based upon the cadastre. The labours of the commission to whom the task was confided were said to have disappointed the Emperor. Very little fruit had been gathered from them, when the Bourbons, on their return in 1814, dissolved the commission and instituted a fresh one. Still the result was meagre and vague. The cadastre gave no account of the number of acres under any description of crop except vineyards; the tax-papers gave no statement of the agriculture of the land assessed any more than our rate-books do in England; and the *octroi* documents only recorded the consumption of the towns, without noting from whence they were supplied. At length, in 1836, the Government addressed a circular to the préfets, enjoining them to have registered, by means of *sus-préfets*, *maires*, and other subordinates, in each of the 37,300 communes of France, an inventory of their rural produce, live stock, and account of their consumption. The meridian of Paris cutting France into two nearly equal halves, and then intersected at the 47th parallel, divides the kingdom into four nearly equal portions: the nord-oriental and occidental, the midi-oriental and occidental; each containing twenty-one or twenty-two departments, and possessing a nearly equal amount of population. More than 100,000 persons were employed in the task, which was executed with great care and accuracy. Yet in spite of the extreme minuteness with which the inquiry was conducted, it is even now difficult to ascertain whether the *morcellement* or subdivision of the soil among an infinity of owners, so much deprecated by some, so much insisted upon by others as a cure for all social evils, is proceeding at a rapid or at a moderate pace. That it is increasing we imagine is indisputable: that an indefinite parcelling out of the surface of the country would also be an evil few can doubt. But whether the *morcellement* is fast tending towards such a condition of things—whether any counteracting or modifying causes are presented by other circumstances, or institutions in the country—we are left in the dark by the *Statistique Agricole*.

In fact, these returns, while they give us the extent of the land under each crop, the quantity and value of the crop, the number of the different owners in each commune, or parish, are not so combined and digested with those of others as to afford a certain and comprehensive view of the state of property in respect of the *morcellement*. An owner may possess fifty acres in as many different parcels of the same commune: he will then figure only as one *côte foncière*,—i. e., be assessable in one sum as for one estate; if a tenth part of this quantity be scattered about in three or four other communes, he will then appear in the same number of returns. The summary or abstract number of *côtes* does not, then, afford an absolute account of the number of owners. An index would, but its compilation would be a task little less troublesome than the cadastre itself; and besides, from the frequency with which, as we shall see, property changes hands in France, it would, in a few years, become of no avail.

The whole extent of France and Corsica is 130,338,486 English acres. Omitting roads, rivers, fortresses, crown property, buildings,

&c., its *superficie imposable*, or, as we should term it, rateable land, appears to be 49,878,208 hectares, or 123,197,173 acres.

In 1789-90 Arthur Young reckoned the value of the gross produce per acre over the whole kingdom at a trifle over 35s., and that the wheat lands averaged 16 bushels an acre. The authors of "*Patria*," a recent statistical compendium, yet in the course of publication, put it at only 32s. From the tables given in the work before us, we think it should be a little higher than "*Patria*;" and we will now lay before the reader the principal figures of the computation, premising that the measures of surface and capacity, as well as the price, have, for the sake of convenience and comprehension, been turned throughout into their English equivalents.

English Acres.		s.	d.
34,333,647 of cereals.....	produce	54	7
6,819,382 „ divers cultures ....	„	87	4
16,705,306 „ fallows .....	„	4	7
10,369,546 „ meadows.....	„	37	2
3,894,171 „ artificial grasses ....	„	43	4
<hr/>			
72,122,052			

Hence 72,122,052 acres, of what we should term in England under the plough and scythe, thus yield 34s. 1½*d.* per acre. More than a quarter of the whole of the breadth producing a rotation of crops (which, deducting the meadows, is 61,752,506 acres,) appear to receive a naked fallow; we suppose, at least, that the trifling item of 4s. 7*d.* an acre, with which these 16,705,306 acres are credited, arises from the browsing of such natural weeds and vegetation as may spring up after the corn crop has been taken off, and before the ploughing has recommenced.

There are, however, 22,702,957 acres of commons, wastes, and pastures, yielding 3s. an acre. We are not informed whether any, and what proportion of these, are in severalty, but it is probably very small—the climate of France being for the most part unfavourable to pasturage (except in the deep alluvial soils near the rivers, and on the mountain sides and hill tops); the plains only remain, therefore, in a state of pasture, on account of the difficulties in the way of enclosure, on which our authors enlarge. If we are to bring their small acreable produce into hotch-pot, the average yield would be lower than we have stated it; the 72,122,052, with the addition of the 22,702,952 acres of waste at 3s., would be 99,695,513 acres at 33s. 7½*d.* per acre. But such pastures, wastes, and commons would not in England be the subject of any separate rating or distinct valuation, though, no doubt, they would be considered in the rental or assessment of the farms to which they were appurtenant; and thus is the fair way, it strikes us, of considering their apparent equivalent in France. We should in that case apportion their money value 3,419,433*l.* among the 72,122,059 acres before mentioned as under the plough and scythe, whose gross yield would then be increased by 11½*d.* an acre, making in all 35s. 0¾*d.*

We have hitherto excluded vines from our calculations, wishing, in the first place, to afford the means of comparing together the crops which are common to this country and to France. Accordingly, with the exception of maize, the acreable value of which produce appears to

be below that of the other corn crops and of tobacco\*, of which less than 20,000 acres are grown, the whole of the 72,122,052 acres hitherto mentioned, are occupied by crops with which we are familiar in England, and which our own soil and climate ripen equally well. There are, however, 4,871,680 acres of vineyards, with a gross receipt of 71s. 8d. per acre. The whole country, then, is thus divided:—

	English Acres.		According to A. Young in 1790.	
Ordinary tillage....	34,333,617			
Diverses cultures	6,819,382			
Fallows .....	16,705,306			
Artificial grasses	3,894,171			
	<hr/> 61,752,506	Arable .....		English Acres. 70,000,000
Meadows .....	10,369,546			
Pasture and wastes	22,702,171			
	<hr/> 33,071,717	{ Meadow, and pasture, and }		36,872,711
		water .....		
Vineyards .....	4,871,680	Vines .....		5,000,000
Orchards, ozier beds, nurseries, olives, &c. ....	3,578,699			
Woods, timber, and coppice	21,747,238	Woods .....		19,850,000
	<hr/>			
Total du domaine agricole....	125,021,840	Vines produced 76s. 6d. per acre, and		
Other surfaces (not rateable)	5,319,504	woods 12s., being cut at 17 years' growth.		
	<hr/>			
Total of France and Corsica	130,341,344			

Into the annual produce of the woods (9s. 6d. per acre,) the vineyards, orchards, chesnut-groves, nurseries, &c., it is not at present worth while to enter; they do not either give the measure of the current annual value of the land, being, in fact, the result of thrift, abstinence, and forethought of former possessors, who planted and provided, to their own temporary exclusion, those of which the present generation thus reap the benefit. It is as to the rate of produce, as far as it can be compared with that of our own country, that this record is interesting to us: 35s. an acre is the average obtained from seventy-two millions of acres, a result which no one conversant with agricultural affairs can peruse without surprise; and this after we have thrown into the scale for the sake of comparing it with England†, the common

\* Tobacco appears to give the largest return in money per acre of any crop except hops; we know, however, that in this country the expense of cultivation of the latter is enormous, and a corresponding condition in France may account for the small growth of so apparently lucrative a plant.

† Mr. Mculloch, in his statistical account of the British Empire, supposed that in England out of 12,000,000 of acres cultivated, only 1,650,000 were fallow, that is, little more than one-seventh. In France, the fallows are about one-fourth. His estimate was:

	Acres.	Rate of Produce.	Quarters.	s.	£
Wheat.....	3,800,000	3½	12,350,000	at 50	30,875,000
Barley and Rye .....	900,000	4	3,600,000	at 30	5,400,000
Oats and Beans .....	3,000,000	4½	13,500,000	at 25	16,875,000
Roots .....	1,200,000	at £ 5	5 0		13,125,000
Clover.....	1,300,000				
Gardens and Hops....	150,000	„ £15	0 0		2,225,000
Fallows .....	1,650,000				
	12,000,000	arable			68,525,000
Grass and Meadows	17,000,000	at £3 10	0 0	per acre	59,000,000
	29,000,000	acres at			£128,025,000

right over nearly twenty-three millions more. But this is not all. Very nearly seven millions are stated to be in *diverse cultures*, that is, potatoes, buck-wheat, legumes, beet-root, hops, rape, flax, hemp, tobacco, and wool. We described this erroneously as arable, wishing to bring it succinctly under the reader's notice, but, in reality, it is mainly raised by spade husbandry and by manual labour. In fact, M. Jung, a writer in "*Patria*," says there are no less than forty million acres cultivated by the spade in France. Now whatever may be the disadvantages belonging to the *petite culture*, however well-founded may be the apprehensions put forward in opposition to the general extension of field-gardens and allotments in England, it is generally admitted that their produce is much greater, that the land yields far more than under the operation of the plough; the objection with us being, that if its quantity is carried beyond a mere supplementary aid to the labourer's comforts, if it induces him to rely too much upon it and to give up working for wages, it may augment the evil it is intended to remedy, by unduly stimulating a population who will, instead of eventually earning therefrom a decent livelihood, be content, as in Ireland, to satisfy a grovelling existence. The bulk raised is certainly larger, it may amount to 20*l.* or 25*l.* per acre, instead of the 4*l.* or 5*l.* that the farmer raises, but if it costs the latter 1*l.* or 30*s.* to raise them, and it occupy the labourer or peasant three-fourths of his time from year end to year end (which at 10*s.* per week would be 20*l.*,) there is, economically speaking, the reverse of gain; since his labour, after replacing its cost, brings in only 25 per cent. additional, while the farmer's capital does as much and far more, and enables him to send a greater produce to market. Keeping these reflections in mind, it must be owned that the very slender return obtained by a population so generally engaged in agriculture as the French are, is astonishing. In England about 3 men to 100 acres is the general average, while in France every 100 acres of the rateable surface occupies 8·17 men\*. M. Dupin, in his *Forces Productives*†, says there are 810 *travailleurs* to every 2,470 acres in France, meaning the combined strength of men and animals in France equalled that number, or in all 37,278,511; whilst, according to the same author, in England the quota was 1,138 to 2,470 acres, or in all 24,632,446, of which the men were 2,132,446 only; the rest their equivalent in animals, at the rate of seven men to a horse, two and a half to an ox. We may add, that in France there are 240,000 asses, each reckoned equal to a man!

M. Rubichon, taking the whole superficies of what he terms the *domaine agricole*, finds that it gives a mean return equal to 30*s.* per acre; this is lower than our own figures, and lower also than other computations by the French themselves, but that difference is only 2*s.*

\* Mr. McCulloch, indeed, by increasing the money value of one of the corn crops, makes the gross total amount to 132,500,000*l.* We have been moderate, and have taken the lowest of his figures, which is, perhaps, too high. Even then the gross produce comes to 4*l.* 8*s.* 3*d.* per acre; and after every allowance for the possible exaggeration of that eminent author, it is a striking contrast with the 35*s.* of the neighbouring kingdom.

\* If we exclude the woods, there remain only 80,372,131, which makes the average employment of 9·5 men to 100 acres.

† Page 116.

or 3*s.* per acre. M. Rubichon embraces, in this result, the 21,747,238 of timber and coppice, which bring in 9*s.* 6*d.* per acre, and the 22,702,957 acres of wastes at 3*s.*, which, together with vineyards, we have excluded from our average, being anxious to present to the English reader the relative yield of the crops with which he is familiar, and having purposely omitted from our calculations those peculiar occupations of the soil which either unduly lower the gross total, or are irrelevant to the inquiry in hand. 35*s.* an acre is, indeed, a miserable return wherewith to pay rent, taxes, and expenses of cultivation for the land. We have seen that A. Young estimated the yield at sixteen bushels of wheat the acre, it is now 14.25 hectolitres per hectare; that is, very little more than fourteen bushels and a half an acre. The account is quite as discouraging in the department of live stock. The numbers annually slaughtered are, oxen and cows\*, 1,211,861, calves, 2,487,362, in all of cattle, 3,699,233. Of sheep and ewes there are 5,804,681. The average weight of the ox is 686 lbs., the cow 506 lbs., calves 173 lbs., of the sheep 50.6 lbs.; pigs and goats weighing respectively 201.7 lbs., and 48.6 lbs., yield a total of 673,389,781 kilogrammes, or about 44 lbs. per head to a population of thirty-four millions†.

It is demonstrable, not only that the Frenchman is much worse off than the Englishman, but that he is less well fed than during the devastating exhaustion of the empire. The present consumption of wheat is 4.73 bushels per head on the population throughout France, the highest being in six departments of the Midi Oriental, where it is 5.97 bushels (25 per cent. less than the average in England); the lowest is in twelve departments also of the Midi Oriental, where the allowance is but 2.64 bushels. So that while our portion in England is (at the rate of one quarter per head) equivalent to twenty ounces of bread per diem, the Frenchman is obliged to content himself with ten ounces, according to Parmentier's calculation; in addition to which, there are for him one ounce and two-thirds of meat daily compared with our six ounces. M. Rubichon may well remark on the extreme sobriety of his countrymen, whose allowance, he says, is only one-third that of the soldier or the convict. This may be true, but it is not conclusive. Soldiers and convicts being mostly men in the prime of life, performing certain duties requiring fair sustenance. When the *average* of a population is taken, there are, in the first place, one-half of them women, who eat less,—(Gasparin reckons that women consume two-thirds only of what the working man eats, and children one-third,)—besides the children and aged, who are smaller consumers. M. Rubi-

\* The beasts are killed at four years old, and are thus 25 per cent. of those living; cows at eight years old; sheep at three years; ewes at nine; pigs from nine months to one year.

† Mr. McCulloch (Statistical Account of British Empire) thinks we have in Great Britain 5,220,000 head of cattle, of which one-fourth (1,305,000) are annually slaughtered, and about 39,648,000 sheep. Some French authors put our numbers higher. M. Ternaux, a celebrated breeder and flock-master, reckoned us to possess 45,000,000 sheep. Speck thought 55,000,000, giving at three and four years old 60 lbs. of mutton each, while France had only 30,000,000, which at six and seven years only netted 30 lbs. Many complaints are made of the division of land as being fatal to flocks, among others by Count Louis de Villeneuve, President of the Agricultural Society of Toulouse.

chon, however, justly censures a member of the French Chamber of Peers (probably Rossi) for having asserted that the French nation was the best fed, clothed, housed, and employed on the face of the globe, not excepting England, and he then exclaims against the flatterers, whether of the despot or the people. That such an assertion could have been swallowed, by either the one or the other, is strange, when the population of Paris is known to have increased 40 per cent. since 1816, and yet, in spite of affluence, royalty, garrisons, and strangers, the number of beasts introduced for consumption has diminished rather than otherwise.

"In some countries," observes M. Rubichon, "that pass for rich, the inhabitants may be poor enough notwithstanding. In one of the most fertile parts of the Austrian Empire, the Lombardo-Venetian kingdom, with a population of 314 to the square mile, there are but 176 head of cattle to every 1000 inhabitants. In the part of its dominions which abuts against Turkey, it has been the policy of the empire to rely on feudalism for her defence against the Moslim; the population there is scanty, but in better circumstances; the proportion of cattle is 554 to every 1000 inhabitants." We would merely remark *en passant*, that the mere co-existence of these two orders in the creation in such and such relative quantities, is itself no proof of prosperity; and that to give entire assent to his opinion, we ought to know what share those 1000 inhabitants obtain of the 554 beasts. We believe that they are reared for exportation, as cattle are in the Highlands, for the betters of those that rear them; the betters being in some cases, as we know, the English serjeants, corporals, and rank and file, stationed in the Ionian Islands, for whose supply these Transylvanian quadrupeds end their career by a six weeks' walk, down from the plains of the Danube to Prevesa and the coast of Albania. In our own country, according to M'Culloch, if his statistical accuracy in a matter so problematical is to be relied on, there are the *equivalent* of 9,184,000 cattle; that is, assuming with M. Rubichon that 39,640,000 sheep are equal to one-tenth of that number of beasts, and adding them to the 5,220,000 cattle, we have 9,184,000, or about 564½ beasts to every 1000 inhabitants in Great Britain; this, however, was according to the census of 1831. Mr. M'Culloch's work was compiled with reference to that, and not to the later census, whose results were not known. But there is every reason to believe that the supplies of animal food have advanced *pari passu* with the population since, and that the rise in price which has taken place has been from the enormous appetite of several hundred thousand railway navigators, artisans, &c., earning high wages, and who have been thus unexpectedly thrown into the provision market as competitors. Vauban, Bossuet, and La Grange, three men of totally different pursuits, habits, and ideas,—war, religion, and science, generals, bishops, and philosophers,—have each told us in different language, what amounts to the same thing, that the richest and most comfortable nation is that which can afford to eat the most meat; but then men of their capacity considered well the subject; they seem to have weighed men as well as counted them, (a suggestion of the late M. Th. Sadler,) whereas the materialist of the present day looks only to facts, figures, and acres.

We observed before, that the condition of the French people and

their command over the necessities of life had rather retrograded since the Peace. MM. Rubichon and Monnier show that the harvest of 1815 yielded only 12 bushels the acre: the most abundant crop was in 1832, when the produce was 21·7 bushels the acre\*. From 1816 to 1825 the average price in France has been 61s. the imperial quarter; from 1826 to 1836 it has been 55s. 6d. It has been the custom to hold out the greater cheapness or plenty of corn abroad, as one of the advantages enjoyed by the foreign manufacturer over our own. We see that in France wheat is neither plentiful nor cheap: in the corresponding periods, from 1816 to 1825, the price in England was 65s. 0 $\frac{7}{16}$ d.; in the latter period, from 1826 to 1832, it was 56s. 9d., being respectively 6·1 per cent. and 2·2 per cent. above the average French prices; a fact equally embarrassing to the ultra free-traders as well as protectionists.

Léon Faucher, in his “*Etudes sur l’Angleterre*,” speaking of the low wages in Dorsetshire, says, “however it may be for England, it is a rate which is only obtained by the French labourer in the immediate vicinity of Paris.”

The comparative condition of the population of Paris in respect of provisions will best appear from the following table, calculated by M. Bénéïstou de Chateaufneuf, for the following periods:—

	1789.	1817.	1837.	1837.
Population of Paris .....	600,000	714,000	802,000	841,700
	lbs. ozs.	lbs. ozs.	lbs. ozs.	lbs. ozs.
Butcher’s meat, per head .....	147 0	110 9	110 3	98 11
Pork, &c.....	9 12	20 9	18 1	17 1
Game and poultry .....	22 9	19 0	18 4	13 12
Bottles of wine .....	120	114	126	111
„ beer .....	9	11	20	13
„ brandy .....	4	6	5	11 $\frac{1}{2}$
Wood (voie) .....	1	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
Coal „ .....	1	1	1	1

This document suggests much matter for reflection. It appears, that while butcher’s meat has decidedly decreased, a considerable augmentation has taken place in the coarse inferior meat; pork, for instance, has nearly doubled. In the former period, the Parisian allowance of flesh of all sorts was 179lbs., of which only 5 per cent. was pork; in the latter it is but 130lbs.,—a diminution of above one-fourth; whilst of what he *now* has, 17 per cent. is pork.

The decreased allowance of wine has been nearly balanced by a greater consumption of beer; no bad exchange, probably, for the inferior kinds of wine with which the lower classes are obliged to content themselves. The share of wood fuel to each inhabitant has been lessened to one-half, as might have been expected, while as yet the deficiency has not been made good by the introduction of coal, of which the proportion burnt appears to have sustained no alteration in sixty

\* 8·60 hectolitres per hectare, 15·52 hect. per hectare.

years. In a work on the “*Culture des Bois*,” published in 1840 by M. Thomas, an extensive dealer in wood, the writer stated the consumption of Paris (600,000 voies) required the produce of 50,392 acres of coppice or taillis of twenty years’ growth; and, therefore, that the whole extent of land requisite for supplying Paris with fuel would be 1,007,480 acres—that is, a district equal to the three counties of Middlesex, Surrey, and Hertfordshire\*, and 4320 acres more.

M. Thomas, a hard-working provincial, grumbles (not with a very good grace, as some will think,) at the excessive demand at Paris for the article in which he deals, thrives, and writes about. “*C’est un véritable gonffre que cette ville . . . qui paye 88,740,815 francs d’impôt, et qui en fin possède 175 journeaux quotidiens, hebdomadaires,*” &c. How, he asks, are these papers to be read at home, or at cafés, and smoking-rooms, unless one’s hands and feet are warm? Paris too, he complains, “has her army of *employés*, who are to be warmed seven or eight months in the year; it has 2,000 bankers and stock-brokers, 1,800 doctors, 910 lawyers, &c., and a host of other functionaries and sinecurists, (much the objects of his ill-will,) but who must, nevertheless, be provided with an agreeable temperature, in order that they may comfortably spend the fifth part of the budget,” which he declares they share among them. In short, at the Ministère des Finances (the Treasury Chambers at Paris) 4,000 to 5,000 stères (2,000 to 2,500 voies) are burnt every season, which is equal to the supply of all Paris in the reign of Philip le Bel (A.D. 1289). When the northern railways transport coal from the mines of the Ardennes, the use of wood as fuel will be lessened, even if it does not wholly disappear; and so, we grieve to think, will the freshness of colour and outline of the Parisian edifices.

On the subject of the meat trade in the French metropolis, a government commission in 1841 reported that the price of coarse meat for the lower classes had risen from  $3\frac{1}{2}d.$  or  $4d.$  the pound to  $5d.$  and  $5\frac{1}{2}d.$ ; and that for the more affluent from  $5\frac{1}{2}d.$  and  $6d.$  to  $7d.$  and  $7\frac{1}{2}d.$  Yet between 1824 and 1839 the butchers declared there was a falling off both in quality as well as size: in the oxen from 748 lbs. to 686 lbs.; beasts, in short, decreasing 7 of our London stones of 8 lbs.; a sheep half a stone (4 lbs.) in the last fifteen or twenty years. In 1710 the Commissioner De la Mare reckoned the average net weight of an ox to be 800 or 900 lbs., it is now 650 or 660 lbs.; and their tallow, which in 1835 amounted to 5,600 tons, weighed only 5,066 tons in 1840, though in the latter year forty-five more beasts were slaughtered than in the former.

So long ago as 1806, M. Sauvegrain, the Giblett of Parisian butchers, had observed the great decrease both in the number and weight of beasts supplied to the capital since 1783. And of late years, the increasing consumption of the flesh of horses, in spite of its prohibition, has compelled the authorities of Paris to legalize its introduction into the city.

	Acres.
* Middlesex .....	180,480
Surrey .....	485,120
Hertfordshire .....	337,920

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1,003,520

Not that this unnatural use of so noble an animal increases the supply of him; quite the reverse. The price, we are told, has risen, on an average, 5*l.* or 6*l.* The heavy cavalry (carabiniers and cuirassiers) now give 30*l.*; dragoons, lancers, and artillery, 24*l.*; hussars and chasseurs, the lightest, 20*l.* And yet again in 1845 the price has risen 2*l.* a-piece, and 4*l.* for the officers' chargers, they being mounted by the state. The French military service requires according to M. Rubichon,—

	In time of peace.	In war.
For the cavalry .....	40,244	56,624
„ artillery.....	9,598	42,076
„ engineers .....	150	621
„ waggon train.....	1,064	7,728
	<hr/> 51,056	<hr/> 107,049

We see, however, from an article in “*Patria*,” by M. M. Lalanne, that in 1845 the actual number of horses in the French army was 87,217, of which number 17,571 are employed in Algeria. There has been an annual *remonte* from native-bred horses of something less than 5,000; and in the ten years 1831—1840 an average importation of 38,464. The 37,643 horses purchased abroad for the army in 1840 cost 27*l.* a-piece. The wear and waste appear very large, the term of service hardly reaching three years. It must be remembered, however, that during the whole of that time the French have been constantly worried by the description of warfare carried on in Algeria, where campaigns against Bedouins, Cabyles, or Memlouks, are sure to be fatal to numbers of the northern bred animals, as also to their riders. Besides reckless expenditure has from the commencement been the order of the day at Algiers. M. Rambot indeed (*Richesse Publique*) says, “Eh bien! avec de l’argent on fera naître des chevaux;” which is true: but it will not do to begin breeding when a war breaks out, on the chance of its lasting six or seven years, to be closed with a brilliant charge of home-bred cavalry. Since the disappearance of the establishments of the old noblesse and country gentlemen, who were breeders for the saddle and for harness, the French have always had difficulty in mounting any large force of cavalry at home. The Directory, the Consulate, the Empire, exacted contributions from all the world: 100,000 horses crossed the Niemen in 1812, of which all but 5,000 remained to feed the vulture between it and Moscow. But the loss (when the French arms began to decline) was not recovered. After Lutzen and Bautzen, Napoleon observed, that had he possessed a corresponding force of cavalry, he should have re-conquered the world; but it existed no more. Grouchy, one of his best officers of that arm, finding no employment in it for him, retired for a time, only re-appearing to assume the command of a division of infantry when France was invaded. Even the *gendarmérie*, scattered all over the country, with every advantage of being on the spot, and opportunity for buying their own horses, obtain three-fourths of them from Germany. In fact, since Prescau, who wrote on these subjects in 1788, lamented that France possessed only 3,300 stallions, from which an annual breed of 100,000 horses might be expected, the number has declined to 900—little more than a fourth part of what a good judge had pronounced deplorably little nearly sixty years since.

A French writer, on the other hand, pays us the compliment of thinking all our hacks, machiners, and postmen, fit for cavalry; and truly they are so, when compared with those of most other nations. Numerically, however, we have not much to boast over our neighbours. The number of horses in France is supposed to be 2,500,000. Jung, in "*Patria*," says more than 2,800,000. Mr. McCulloch thinks that in Great Britain there are 1,500,000; others, 1,800,000; but these do not take account of ponies, or, perhaps, of exempted horses used in the yeomanry, nor those of the regular cavalry. Altogether we have probably not more than 2,000,000 of horses of all sorts.

M. Rubichon is in a dilemma from the dearth of horses and cattle. Wishing that France should be powerful and well prepared for war (which, without cavalry, she cannot be), he is anxious for the increase of that animal; but then this can only happen by the exclusion of the ox—an unfortunate choice between honour and starvation. Every horse in England has been reckoned to cost as much in maintenance as a labourer's family. M. Louis Blanc, in his "*Histoire de Dix Ans*," shows there are some stables where things are less economically managed. Alluding to the 300 *chevaux de luxe* maintained for the royal equipages, at an expense, it is said, of *mille écus* each, "*Pourquoi traiter*," asks he, "*chacun de ces chevaux comme un conseiller de Cour Royale, et deux fois mieux qu'un membre de l'Institut?*" Either the horse is extravagantly dear, or the councillor is marvellously cheap—we cannot stop to examine which. The Institute is still worse off, as a pair of *savans* are thereby reckoned equal to one royal quadruped. "It is an error," he adds, "to infer that inequality of territorial fortune entails a corresponding inferiority of subsistence—people do not eat their land, but that which the land produces. Equality in the division of subsistence—that is the only one reducible to practice—the only one which five-sixths of the nation (that is, *the people*) claim in return for labour far more severe than that which is borne by the other sixth, to whom the name of *the public* is given." That is, the law-making, tax-collecting, office-holding public, who oppose their hateful minority to the labourer, soldier, artisan, and operative.

"Persons," he continues, "who doubt these facts may consult the English commissioners of inquiry into the state of the hand-loom weavers—men who believe themselves, and whom we imagine to be the most unfortunate of mankind: they establish clearly before the committees of Parliament the quantum of food necessary for their existence—it is of three or four times the value (in money) of what our peasants of the South of France consume, who only get chestnuts, dry pulse, Indian corn, barley, and rye. These English hand-loom weavers are very unhappy because they can only obtain bread and work in a precarious manner. *We will only observe that there has in all times been more inequality in France than in England in this respect: but we are ourselves an eye-witness that the Revolution has increased these inequalities tenfold.*"

It does not appear, however, that the division of the land which he so much complains of dates only from the Revolution. The legislation consequent on that event rendered it compulsory—at first absolutely vesting in the children the whole inheritance; at last leaving to the parent the disposal, by will, of one share more than the number of

the issue; so that if there were but one child, half, if two, a third of the estate was at the disposition of the testator. The decay of the landed aristocracy began in Louis the Fourteenth's time.

The imperative *morcellement* was, however, much arrested by twenty-two years of war, up to 1815, which settled a number of co-heirs. One law gave a man a bit of land, another marched him off from the cultivation of it to the Tagus, the Niemen, or the Danube, where perhaps he left his bones; but "in 1815, with the peace, the prisoners and the armies re-entered France. . . . At this period the mattock goes to work on hotels, convents, and churches in the towns, as on the castles and abbeys in the country—the axe fells the trees scattered about on the plains as it does the forests on the mountains: the soil crumbles down the hill sides—the torrents devastate towns—the plough first, and then the spade, come to break up the meadows by the sides of rivers, as well as the sandy heaths of the interior—and all this by opulent companies, organised for the express purpose. This indeed is the only unity of action that France has exhibited at this period, for there is not a single town, not a village, hamlet, or even family, which has not participated in these destructions, or been a victim to them. Never, perhaps, since the creation of the world, did the human race perpetrate a similar suicide. Sylla forced his 6,000 prisoners to slaughter each other; but here all these destructions have been volutary. Yet this has been termed the Restoration."

But it is time to draw the reader's attention to the statistics of the *morcellement* itself. France and Corsica contained, in 1815, 10,083,751 *côtes foncières* (*i. e.* distinct properties separately assessed to the land-tax), which, in 1835, had increased to 10,893,528.

Of these properties	5,205,411	paid less than	5 francs of impôt.
"	1,751,994	paid from	5 to 10 each.
"	1,514,251	"	10 " 20 "
"	739,206	"	20 " 30 "
"	684,165	"	30 " 40 "
"	553,230	"	50 " 100 "
"	341,159	"	100 " 300 "
"	57,555	"	300 " 500 "
"	33,196	"	500 " 1000 "
"	13,361	"	1000 and upwards.

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10,893,528

The first, 5,205,411, M. Rubichon shows to belong to about half as many families, who thus derive a mean rental of about 40s. per annum from their property. There are, besides, about 4,250,000 of families (out of the whole 5,446,763 that are owners of land), and who appear to derive an annual income of 68s. only from their portions of the soil. Nothing is more common than for these little freeholds to become forfeited to the state, from the inability to pay the *impôt foncier* (which appears to be about 7 per cent. on the rental). The unfortunate defaulter is allowed, on payment however of a registration fee of two francs, to give up for ever his little plot, in order to save his slender personality and household stuff from the clutches of the tax-gatherer. This is not all: there are not quite 11,000,000 of separately rated *côtes foncières* in France, but these are divided into 123,360,338

parcels, about eleven to a *côte*—not enclosures of the same farm in juxtaposition to each other, but more like our lands lying in common fields in England, perpetually intersected by those of the neighbours. Within ten years, more than half the value of the land of all France, 933,880,000*l.* worth of property has been proved to have changed hands (what a career for the Rainys and Robinses!!), of which 372,680,000*l.* have been by inheritance in the usual course of nature; 85,800,000*l.* by donations *inter vivos*, and with the commendable view of preventing dismemberment. But the residuary 475,400,000*l.*, i. e. *more than a fourth part of the whole fee-simple of the country, has passed in those ten years into the hands of complete strangers.* At this rate a generation and a half would see the entire kingdom in the hands of another race, totally unconnected with its former owners; and we doubt whether, except in a revolution, a conquest, or newly-settled colony, such a circumstance has ever been witnessed before.

These sales, of course, multiply the owners; there is in France the same intense anxiety to possess a bit of land as in Ireland. It has given rise to the "*bandes-noires*," an expressive term for an association of notaries, country bankers, attornies, land surveyors, and jobbers of all sorts, who combine together when an estate is to be sold, tempt the owner with a good price and an exemption from all trouble to dispose of it to them, they then cut it up into lots to suit the needy market. A farm of 200 acres is thus parted off into twenty, fifty, or more allotments, which are paid for partly in money, and partly mortgaged: and this accounts for another phenomenon—the enormous extent of debt with which the land is burdened, considering that almost the whole of it changed hands at the Revolution, that there was an entire sweeping away of titles, charges, mortgages, fortunes, &c., and that almost every title in France is now less than fifty years old. Yet within that time, or, indeed, far less, the owners have managed to charge an income of 60,823,880*l.* with a debt bearing an interest of 22,466,531*l.* This debt increases, and must continue to do so. The avidity to possess land, the fancied independence that it confers on its owner, acts on the 4 $\frac{1}{4}$  millions of families and their kindred uneasingly. "These heroic men," says their friend and admirer, Michelet, in his "*Peuple*," "fight as it were for their lives, but usury fights against them with a force of 4 to 1; their land brings them in 2 per cent., and they pay 8 per cent. for borrowed money."

In earlier times it was doubted whether, on the whole, the *morcellement* was increasing; unfortunately, the returns made by the 80,000 officials, lawyers, surveyors, tax-gatherers, and registrars, whom it is the policy of the French Government to retain in its pay, do not distinctly state how that fact is; we are left to inferences, and they appear to justify some of M. Rubiehon's conclusions. In some departments that had been more accurately examined in 1826, when the law before alluded to was under discussion, the lists or *côtes foncières*, presented,

In 1815.....	149,314	contributors.
In 1826.....	161,732	„
Being an increase of....	12,458	„

Those paying less than 16*s.* of impost, (having an estate of, say 6*l.* or 7*l.* rent) were,

In 1815 .....	116,433
In 1826 .....	133,903

So that, though the general increase had only been 12,418, yet the number of smallest ratepayers had increased by 17,470, by the diminution, as we shall see, of the other classes. Those paying from 16*s.* to 25*s.* had in the same time become fewer by 621; those of from 25*s.* to 54*s.* 8*d.* by 1,328; the next class paying from 2*l.* to 4*l.*, were 1,436 less; that above them taxed at from 4*l.* to 20*l.*; 1,394 fewer, from 20*l.* to 40*l.* diminished by 167; and those above 40*l.* by 96. We have before remarked upon the 123,360,338 parcels, whose variety of ownership we cannot ascertain exactly, but the continual severance of properties is almost as mischievous as the diminution of them. It is, indeed, sometimes contended, that on the whole the additions and cumulations balance the divisions. But assuming that each parent brought an equal portion into the common fund, in the usual case of three children there is a diminution of one-third; if there were only two to inherit, there would be neither gain nor loss. In the case of an only child, there would be a gain, as far as mere pecuniary and apparent value; but by the separate allotting, the use, convenience, and real worth of the property, that which commands the *pretium affectionis* is most materially impaired.

We have now gone through the principal heads of MM. Rubichon and Monnier's statistics. As an epitome of all that is known relative to the production of agriculture, it is unequalled by anything we possess in this country. The work would well repay the perusal of it by those who are curious in these matters; far from being a dry inquiry, it is lively, spirited, and abounding in pleasantry. And even after making every allowance for the strong political prejudices of the chief author, his work develops a state of affairs pregnant with danger, not only to the progress, but ultimately to the liberties, of France, and with instruction and warning to her neighbours. The morcellement, at whatever rate it proceeds, be the ultimate agrarianism near or remote, cannot, as it appears to us, be stopped until the absolute ruin of the country shall have been effected. The majority are interested in maintaining it; that is, if three be the average of children to a marriage, there would be two in favour of equal division against one who might wish for an alteration; as long, that is, as the property to be cut up is worth the operation: it is only when it ceases to be so that we can expect from a general national assent the renunciation of the then valueless birthright. "*C'est un vice radical irrémédiable,*" wrote M. Dupin of it twenty years ago, in his *Forces Productives de la France*: he observed that England then averaged three times as much meat, milk, and cheese for every individual of her population as France. But then he calculated that the animal force, applied to equal surfaces of territory, was in Great Britain eleven times that of the human, while in France it was only four times. The petite culture appears to substitute men for animals, but on condition that the former undertake the labour performed in this country by the latter.

M. Say thinks extensive farming multiplies towns and favours im-

provement; while he doubts whether there is the same amount of labour and value invested in the little peasant holdings in Switzerland and Germany as in the large farms of England. "Une culture misérable n'est donc pas toujours la compagne nécessaire de la petite culture, mais elle est inévitablement la compagne de la paresse et de l'ignorance." A mixture of all kinds (and we subscribe heartily to it) he thinks best: large for corn, grass, oleaginous plants, and live stock; small for olives, bees, silk, hemp, flax, and legumes; subject, of course, to climate.

M. Dunoyer, in his "*Liberté du Travail*," has some sensible remarks on the size of occupations:—"When the soil is fertile there may be more subdivision than where it is poor. But the division will *eventually be in proportion to the capital of those seeking to cultivate it*: as, for instance, England is rich, therefore her farmers can afford large breadths. If the owners of the land are poor and ignorant, small cultivation will prevail; and small properties cut up into '*lambeaux*' (rags), will command a better price. So that in France, though the *tendency* of the law is complained of, the temptation to the greater owners is to anticipate it, and set themselves up to supply the market."

A statutory division of the soil on the death of each owner is wholly inadequate as a preventive against poverty; and the only equality that can be attained by forcible regulations is one of distress and indigence. In the Nivernais, says M. Bourgoing, a president of one of the agricultural societies of the department, where agriculture, collieries and iron works, and manufactures, have made great progress, and where the condition of the labourer is superior to what it is in France—so much so, that for eighty days of the summer his wages are 1*s.* 8*d.* a day,—yet his whole yearly hiring brings him in but 16*l.* 3*s.*, on which he keeps a wife and three children, pays taxes, rent, and obtains nothing from the poor-rates. For his dwelling, including from twenty to forty perches of ground, he pays 2*l.*, besides 2*s.* 6*d.* for impôt, and 2*s.* in lieu of work on the roads. The dwelling is particularised as consisting of *one room, one garret, and one cellar*. . . . . Further on we are told that it is small, damp, *generally without windows*, air and light enter by a single door, which generally shuts ill, and lets in the wintry cold, and all the exhalations of the neighbouring dunghill. Really sooner than divide such houses, it would be better for the rural population to betake themselves to tents—we mean the camel-hair tents of the Bedouins, thick, dark, and heavy—good defences, in short, against both heat and cold. A large proportion of the dwellings throughout France are of the meanest description—the extremes of grandeur and misery are as strikingly contrasted there as elsewhere. The 50,476 houses of Paris contain, on an average, 34 openings. On the other hand, France has 346,401 human habitations within its limits (like rabbit burrows) with *but one opening*: from 1,000,000, therefore, to 1,500,000 of her population are totally independent of the glazier: 1,817,328 have but two openings, *i. e.* one window, besides the door; 1,320,937 more possess but three apertures. These 3,483,466 houses (more than half the total number of houses in the country) have only this moderate provision for ventilation and light. The numbers are accurately known, for the best of all reasons, because they are all taxed—no exemptions.

M. H. Passy, formerly a peer and a minister, has endeavoured to defend the system attacked by Rubichon. First he tells us large properties do not ensure large farms, as witness Europe before the French Revolution and Ireland at the present day, where, though the estates are extensive the occupations are minute. Next, that large farms can co-exist with a general minute subdivision of the soil. The reader will at once see the impossibility in practice of this hypothesis. How can a farmer, in order to obtain the necessary occupancy and uniform cultivation of the lands belonging to fifty different owners, some under disabilities, others minors, others beyond seas—how is he to conclude agreements cotemporaneously with such a variety of wills, ages, interests, each jealous of the other, each fearful that his own plot may be robbed for the benefit of his neighbours; all having such diversity of estate in their land, old and young, reckless and prudent, obstinate and selfish? Even in England, where the advantages of cultivation on the large scale are so much better understood, it appears in those parishes where common fields still continue to exist, expense, ignorance, or other feelings interfere to prevent the throwing them together, and practically the result is, that each patch is tilled by a different tenant, is in a different course of rotation, and really does present the appearance of what he terms a “*raste échiquier*.”

M. Passy, though he adduces a few instances in which the population has increased, aware that the whole range of statistical facts by no means indicate agricultural prosperity in France, endeavours to apologise for it by the reflection, that land on the whole will always fall into the hands of those who turn it to the best account; the competition is so great that it will not remain long in the hands of those who do not thrive upon it: the owners of these parcels, after striving hard for a livelihood for some years, are compelled by increasing misery to sell them, and this puts everything right again. Surely this is a desperate remedy to rely upon. Is a man to be taught first of all to place an infinite value on the possession of his bit of land, to devote year after year of his strength and manhood to its cultivation, merely to learn that in his decline, in the evening of his life, he is to be driven forth into exile? Are the affections, the feelings, the habits of those who have struggled so hard to extract a competence from an ungrateful vocation for the best and most active portion of a life, to be overlooked? is the scorning of these ties without danger? Is the bitter disappointment of numbers, deprived alike of past comfort, of present possession, and of future hope, a contingency which a statesman should contemplate with complacent optimism?

M. Passy is not much more than half right when he adverts to the safety enjoyed by a state in which a large portion of the population is engaged in manufacturing articles of primary necessity, and for which, therefore, the demand is so general as to ensure for the producers an uninterrupted livelihood. The industry which supplies the caprices and pleasures of consumers in distant countries, of men whose manners we cannot influence, of nations liable and likely to be supplied by a shift of the fashion, a turn of the die, an accidental discovery made in some other quarter to the exclusion of our own, is no doubt precarious. Its failure would bring home to the heart of England unexampled distress. Manufactures of more palpable utility do not appear exposed to

similar vicissitudes. Our clothing trade has seldom been long suffering, while our silk manufactures in Spitalfields like those of Lyons are periodically subject to severe depression. But then, on the other hand, a land in which no luxury is enjoyed, one entirely free from "barbaric splendour and pomp," still more so, one in which property is equalized by law, leaves no margin and store for bad times; it supposes famines unknown, seasons uniformly healthy and propitious; it provides no reserve-fund wherewith a rich class, as in England, has occasionally kept alive a poor nation, such as Ireland.

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*Facts bearing on the Progress of the Railway System.*  
By WYNDHAM HARDING.

[Read before the Statistical Section of the British Association at Swansea,  
14th August, 1848.]

THE modern Railway System of Europe may be said to date from 1830, when the construction by the English engineer, George Stephenson, of the Liverpool and Manchester Railway with its locomotive engines, was completed.

After that date we heard no more of such prophecies as the following, (from the Quarterly Review in 1825) which it is not useless to record as a lesson of caution to us for the future. "As to those persons who speculate on making railways generally throughout the kingdom, and superseding all the canals, all the wagons, mails, and stage-coaches, post-chaises, and in short, every other mode of conveyance by land and by water, we deem them and their visionary schemes unworthy of notice. What, for instance, can be more *palpably absurd and ridiculous* than the following paragraph," in which a prospect is held out of locomotive travelling twice as fast as stage-coaches? "We should as soon," adds the reviewer, "expect the people of Woolwich to suffer themselves to be fired off upon one of Congreve's ricochet rockets as trust themselves to the mercy of such a machine going at such a rate."

The modern railway system has, however, not only done this, giving rise to new habits in the present generation, but it has proved to be the great mechanical invention of the 19th century as the steam-engine was of the 18th; but it is still in its infancy, it is especially the province of statistical inquiry to watch its growth, so that on the one hand, timely remedies may be applied to its defects, and on the other, free scope may be given to its beneficial tendencies.

Valuable papers have been contributed by Mr. Laing, Mr. Porter, Mr. Graham, and others, analysing the traffic on railways during the infancy of the system to the year 1843. Shortly before that period, there had been a pause in railways. During two years a few miles of railway had been sanctioned—but the period which has since elapsed comprises the memorable railway mania years of 1845 and 1846—under this excitement, intelligence and emulation have been stimulated among the managers of railways to the utmost, and the system has rapidly advanced. The consolidation of railways under a few great companies by the process styled amalgamation has proceeded—the

atmospheric, an entirely new system of traction, has been brought forward. The electric telegraph (conveying intelligence, it is said, at the rate of 280,000 miles a second) has been widely introduced. Express trains, travelling at nearly the highest attainable speeds, have been established, and the length of railways in operation has been doubled.

It therefore becomes a matter of much interest to enquire to what the results of so active a period point.

Have low fares answered? Has the 3rd class traffic, the most important to the bulk of the people, been encouraged, and has it been found wise, not only for the users but for the owners of railways, to encourage it, or the reverse?

Has the increase of speed been successful, and are we likely to travel faster or slower hereafter? How have the receipts kept up while the length of railway has been doubled? Did the first 2,000 miles get the cream of the traffic, as has often been thought, and has the average receipt per mile consequently fallen off? Should the experience of the past, in short, give us confidence in urging on the system or not?

In the following investigation and collection of facts it has been attempted to throw some light upon these points, the recent publication of the official railway returns for 1846 and 1847 affording peculiar facilities for the purpose\*.

The following paper refers to English, Scotch, and Welsh lines only—the Irish lines are excluded, the economical condition of Ireland being different from that of this country, and few railways being there open.

*Comparative Lengths of Railway open in 1843 and 1847 and Receipts thereon.*

	Miles.
The length of English, Scotch, and Welsh Railways open in June, 1843, was	1,990†
The length of Railway open at the commencement of 1848 was.....	3,597‡
The gross receipts returned for the year 1842 were .....	£4,740,000§
The gross receipts returned for the year ending June 30, 1847, were....	8,326,772

After making the necessary corrections in the figures¶ given above the average receipts per mile of railway were,

In 1842.....	£2,489
In 1847.....	2,596

We therefore arrive at the important fact, that although the mileage of our lines has been doubled, the average receipts per mile have been more than doubled.

\* I have to acknowledge many obligations to those who, having gone over parts of the field before, have helped to reduce the mass of figures with which we have to deal into shape. It is to be regretted that the Statistical Returns of the Government Railway Department are not made out more completely, and with greater punctuality. Columns are frequently not duly filled up, and the returns are not published for a year after they are due. Thus the Returns to the end of 1845 were not published until 1848.

† Mr. Laing's Paper, 1844, p. 5, appended to Fifth Report from Select Committee of Railways, 1844, (115·2.)

‡ Report of Railway Commissioners, p. 11, (after correction for lines opened in 1847.)

§ Mr. Laing's Paper, 1844, p. 7.

|| Railway Commissioners' Returns, 1846 and 1847.

¶ Principally for lines opened in the course of the year.

This must be regarded as a very favourable general feature in the state of railways; there was much reason to fear, that as the first railways ran between the great towns or traversed the manufacturing districts, the railways which were next opened would show a great falling in the receipts. Hitherto, then, we find that this is not so—a fact which tends to give us confidence as regards the great length of railway which has been sanctioned by Parliament but is not yet open.

### *Lines Sanctioned but not Open.*

The length of railway sanctioned by Parliament at the commencement of 1848, but not then open, was 7,150 miles\*. A considerable portion of this is in progress more or less rapid.

On the 1st May, 1847, 5,209 miles were returned† as in progress, on which 218,792 persons were employed, or 42 per mile‡.

When the railways now in contemplation are completed, and it is probable that the greater portion will be so in the course of the next five years, we shall have upwards of 10,000 miles of railway open, on which, judging from the numbers employed on lines now open§, (viz., 14 per mile) 140,000 persons will be permanently employed at good wages, representing (at 5 to a family)  $\frac{3}{4}$  of a million of the gross population. The importance of this addition to our internal communications will be appreciated, when it is remembered that there appear to be only about 4,000 miles of inland navigation, and 30,000 miles of turnpike-road open for traffic in the country.

### *Analysis of Traffic.*

The gross traffic for the year ending June 30th, 1847, was, as we have seen ..... £8,366,000

There were conveyed during this year (from the Returns of the Board of Trade) in round numbers||

Seven million tons of merchandise and goods.		Half a million horned cattle.
Eight million tons of coal.		One and a-half million sheep.
		A hundred thousand horses.

Of the gross sum £8,366,000, the passenger receipts were ..... £5,024,000

The receipts from all other sources, goods, cattle, carriages, parcels, } 3,342,000  
mails, &c. .... }

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8,366,000

In every 100l. of receipts the passenger traffic therefore forms..... 60 per cent.

The traffic receipt from other sources ..... 40 „  
100 „

In 1842 these proportions were as..... 64  
to..... 36  
100

\* Parliamentary Returns.

† Parliamentary Return, (House of Commons,) 1847, (579.)

‡ Ibid.

§ As in this Return the number of miles returned as in progress are more than those really in construction, the number of men employed per mile is less than the truth.

|| These Returns are not complete, and they require some correction in respect of the same articles being sometimes conveyed over several different lines, and therefore counted more than once.

The proportion of traffic-receipts from other sources than passengers (being principally goods and cattle-traffic,) has thus increased, since 1842, as 40 to 36, or 11 per cent.

The total number of passengers carried in the year ending (June 30th)

1847 was ..... 47,484,134\*  
As compared within 1842 ..... 22,403,478†

The average distance travelled by each passenger was, in 1842, 13 miles, in 1847 it was 16 miles.

The numbers and proportions of classes were

	In 1847.	In 1842.
1st class .....	14·2 .....	20·2
2nd class.....	38·3 .....	45·4
3rd class.....	47·5 .....	34·4
	<u>100·0</u>	<u>100·0</u>

Thus, the 3rd class passengers (which have increased in number since 1842, from 6,000,000 annually to 21,000,000) now form nearly half of the whole number travelling, whereas in 1842 they formed less than one-third.

Only one-third of the 3rd class passengers have availed themselves of the parliamentary trains, arbitrarily (and as it appears to me unfairly) imposed upon railway companies in 1844.

The following Table, comparing the fares of the metropolitan railways in the year ending June, 1843, with those ending in the year June, 1847, shows the great reduction which has taken place in fares during the last four years.

To make the comparison more appreciable, the fares are taken as for 100 miles in pence.

Railways ‡.	1st Class. Fare for 100 miles.		2nd Class. Fare for 100 miles.		3rd Class. Fare for 100 miles.	
	In 1843.	In 1847.	In 1843.	In 1847.	In 1843.	In 1847.
London and North-Western....	334·8	218·1	241·1	144·6	131·2	93·3
Great Western .....	303·1	274·4	208·5	187·8	118·3	100·0
London and South-Western....	312·0	245·0	210·0	168·0	120·0	96·0
Eastern Counties .....	294·1	210·0	227·4	141·5	164·7	92·3
Northern and Eastern .....	217·4	....	165·5	....	110·9	....
South-Eastern .....	227·0	214·0	150·0	152·0	87·5	90·0
London and Brighton .....	350·0	263·0	225·0	171·0	150·0	109·0
Average .....	303·5	237·4	210·3	160·8	128·6	96·7
Difference per cent. ....	....	21·8	....	23·8	....	25·0

These results do not include the Return Tickets, generally introduced within the last three years, and effecting a reduction of fares even greater than is here shown.

This reduction in fares, coupled with the increase in the number of trains and the speed of travelling, must be regarded as the principal

\* Railway Commissioners' Return, 1848.

† Mr. Laing's Paper, 1844, p. 11.

‡ Return of the Railway Department.

cause of the great increase of the number of passengers since 1843. We have already seen that the number in 1847 and 1842 are as 47,484,134, to 22,403,478. If we take into account the number of miles opened at those dates respectively, the annual number per mile was in 1842 = 11,772, and in 1847 = 14,806.

It was once the fashion to make comparisons unfavourably to our railways as regards fares with foreign railways. The comparison was inadmissible, because foreign railways were either constructed in whole or in part by the state, or else received direct aid from the state; whereas our railways have received anything but assistance from the state. Nevertheless, the fares of our lines, as given in the above Table, will now bear comparison with those of either the French, the Belgian, or the German railways, when the accommodation as to luggage and day-tickets, which we grant and they do not, is taken into account. In despatch and convenience of arrangement the comparison is altogether in favour of the English lines.

The proportion of 3rd class passengers has, we have seen, satisfactorily increased between 1842 and 1847; the 3rd class traffic has, however, developed itself very differently on different lines and it may be well to inquire into this.

The statement subjoined shows the 3rd class traffic of two metropolitan companies, (the Eastern Counties and the Great Western) two North of England companies, (the Lancashire and Yorkshire and the Newcastle and Berwick) and two Scotch companies, (the Edinburgh and Glasgow and Glasgow and Greenock).

*Year ending June 30th, 1847.*

Name of Railway.	Length in Miles.	Number of 3rd Class Passengers conveyed.	Proportion in every 100 of 3rd Class Passengers.
Glasgow, Paisley, Greenock .....	23	957,534	83·3
Newcastle and Berwick .....	65½	944,891	79·5
Edinburgh and Glasgow .....	46	836,025	72·8
Lancashire and Yorkshire .....	109	2,090,624	72·3
Midland .....	285	2,366,892	65·4
Eastern Counties.....	177	1,044,158	50·3
Great Western.....	240¾	419,663	14·6

From this it appears, that while the Great Western Company, on a line of 241 miles long, have only carried 419,663, the Edinburgh and Glasgow Company, on a line 46 miles long, have carried 836,025, the Midland Company, (285 miles long) 2,366,892.

And that while on the Great Western only 15 out of every 100 passengers conveyed are 3rd class.

On the Eastern Counties, 50 out of every 100, and on the Glasgow, Paisley, and Greenock, 83 out of every 100 are 3rd class passengers.

Although it is true that the different character of the population and other circumstances will affect, to some extent, the relative number of 3rd class passengers on different lines, the disparity here is so great, that we can come to no other conclusion than that the arrangements of such a line as the Great Western as to 3rd class passengers,

must be such as to preclude hundreds of thousands of 3rd class passengers yearly from using the railway, who, with greater facilities, would be glad to use it.

I say this with confidence, because as manager of the Glasgow and Greenock Railway, where the 3rd class system has been more developed than on any line in the country, (and where, under very peculiar circumstances, we carried passengers for  $\frac{1}{4}d.$  a mile) I had an opportunity of observing the real advantage and comfort which cheap travelling is to the working-class.

As the results of the working of that line afforded a remarkable instance of the effects of low fares, I have thought that it might not be uninteresting to record them.

The River Clyde runs beside the Glasgow, Paisley, and Greenock Railway, which is 23 miles long. The steam-boats had long afforded an excellent mode of transport between Glasgow and Greenock, the fares by boat before the railway opened, being from 1s. to 2s., and the time occupied about two hours. Glasgow, with a population of 274,000, was at one end of the line; Greenock, with a population of 36,000, at the other end of the line. Various summer watering places also lay at the mouth of the Clyde below Greenock. On the line were Paisley, (population 60,000) and Port Glasgow, (population 7,000).

Between Glasgow and Paisley was a canal, on which there were passenger-boats, drawn by horses at a speed of six miles per hour. These facilities gave rise to a great traffic before the railway was opened, the yearly number travelling along the course of the railway being 1,185,340, and the average fare 1s. 4d.

Notwithstanding this (in 1843), after the railway was opened, the numbers travelling by all means of conveyance were found to exceed 2,000,000, or to have increased 100 per cent., the average fare having in the meantime fallen to 10d.

This was the gross result, but the fares of the railway (originally 2s. 6d. 1st class, and 1s. 6d. 2nd class for 23 miles) were varied from time to time, and as I closely observed the effects of these variations, having caused an account to be taken of the number travelling by steam-boat and canal, as well as by railway, it may be well to state the results.

*First Alteration.* In 1842, uncovered open 3rd class carriages, at a fare of 6d. for the 23 miles, (or about  $\frac{1}{4}d.$  per mile) were introduced on the railway between Glasgow and Greenock, whereupon the annual number of railway passengers between those places increased 224,000, being an increase of 32 per cent. of the total number travelling between these places either by railway or steam-boat.

The number of 1st and 2nd class fell off at the same time 39 per cent., the passengers having transferred themselves from the higher class carriages into the open 3rd class carriages, tempted by the difference of fares between  $\frac{4}{5}d.$  per mile and  $\frac{1}{4}d.$  per mile.

The gross receipts, however, increased simultaneously 15 per cent., the working expenses on the other hand, did not appreciably increase, although the average number of passengers per train increased from 72 to 117.

*Second Alteration.* The 3rd class fares were subsequently (in 1843) raised from 6d. to 1s., with the hope of increasing the revenue. The

whole number travelling (by railway and steamboat) immediately fell off 18 per cent.

The 1st and 2nd class railway passengers increased by 10 per cent., but the gross receipts fell off more than 10 per cent.

The effect was also tried of making the 3rd class carriages more comfortable by covering them in. This was found not to increase the number travelling, but it did reduce the number of 1st and 2nd class passengers by 16 per cent., and therefore caused considerable loss to the company.

The same experiment was repeated on the 2nd class carriages, they were made more comfortable by inserting glass windows instead of wooden shutters, and by carrying the interior partition higher.

The number of 1st class passengers shortly fell off by 12 per cent., but beyond this the 2nd class passengers did not appreciably increase; this experiment, therefore, also resulted in loss.

The results of these experiments were then,—

1st. That a reduction of fares to  $\frac{1}{4}d.$  per mile, even from so low a rate as  $\frac{1}{2}d.$  per mile, increased the number travelling by nearly a quarter of a million, or by two-thirds of the whole population of the district.

As these people were generally of the less affluent classes, it appears that they were actually drawn out of the noisome streets of Glasgow to the mouth of the Clyde, by the temptation of a very low fare, and immediately that the fare was raised they were driven back again into the city.

2nd. That under the circumstances of the line in question, cheap and rapid conveyance increased the number travelling, while improving the lower priced carriages did not appear to act in the same way, but merely tempted passengers from the higher class carriages, those from the 2nd class into the 3rd class carriages, and from the 1st to the 2nd class.

Of course it by no means follows that similar results would ensue on lines in other localities, each case must be determined by its peculiar conditions.

3rd. That no limit can be assigned to the number of travellers which cheapening and quickening the means of conveyance will create. The introduction of the railway, even where steamboats already afforded a most pleasant, rapid, and cheap communication, increased, we see, the number travelling from eleven hundred thousand to two millions, two millions being five times the whole population of the district.

I doubt whether either at home or abroad, so large a proportion of travellers to the whole population is to be found.

The traffic between Glasgow and Paisley is probably the most remarkable instance on record of the increase of travelling caused by increased facilities. In 1814 there was only one coach a week between Glasgow and Paisley conveying about 2,000 passengers per annum; if we multiply this by 5 to allow for the greater number of gigs and private vehicles then in use, we only get 10,000 passengers per annum conveyed between the two places.

In 1842, the numbers travelling by public conveyance between Glasgow and Paisley were upwards of 900,000. Now, as the population between 1814 and 1842, had only about doubled itself, while the traffic, as we see, had multiplied itself ninety-fold, it follows

that the increased facilities of transport had increased the number travelling relatively to the population 45 times, that is to say, that for every journey taken by a certain number of inhabitants of Glasgow or Paisley in 1814, 45 journeys were taken by the same number in 1843.

These results, I conceive, place it beyond a doubt, that we should spare no effort to make railway travelling cheap and within the reach of all classes.

Now, there is only one true way of encouraging cheap travelling, and that is by keeping down the original cost and the annual expenses of railways. All the other contrivances which the public are inclined to trust, such as legislative restriction on profits and so on, are mere delusions. Even competition is inapplicable to railways, and is not to be relied on\*. Mr. R. Stephenson, the engineer, put the whole case into one sentence, when he said, "where combination is practicable competition is impossible." The experience of all railway competition shows that this is true; when, therefore, under the plea of competition, unnecessary outlay is being incurred, the public may rest assured that they will ultimately suffer for it in the charges they will have to pay.

The late Mr. Butler Williams† and Mr. Hill Williams, the actuary, have compiled some useful‡ tables to show arithmetically, "how far a remunerative charge for the conveyance of passengers and goods on railways is modified by the original cost and other circumstances."

The following is an extract showing the effect of increased cost of construction.

	Total yearly traffic, number of Passengers or Tons of Goods.	Original cost of construction £15,000 per mile.	Original cost of construction £20,000 per mile.	Original cost of construction £25,000 per mile.	Original cost of construction £30,000 per mile.
Fixed charge per mile on every passenger or ton of goods requisite in order to give common interest, 5 per cent., on the outlay.....	90,000	1·00 <i>d.</i>	1·33 <i>d.</i>	1·66 <i>d.</i>	2·00 <i>d.</i>

We see from this that the fixed charge on every ton of goods or passengers must average 2*d.* per mile to return common interest on a railway costing 30,000*l.* per mile, whereas, if the railway cost 20,000*l.* 1½*d.* per mile would be sufficient, and if it cost 15,000*l.* 1*d.* per mile would be sufficient. It is so important that there should be no doubt in the public mind on this point, that I have enlarged upon it in a note§, and

\* Evidence, Select Committee on Railway Act Enactments, 1846.

† See Mr. Butler Williams' interesting paper on Railway Management. *Journal of the Statistical Society*, v. ix., part 2.

‡ Appendix, No. 7, Select Committee on Railway Act Enactments, 1846.

#### § *Theory and Practice of Railway Charges.*

There is a mischievous notion abroad which has been countenanced even by some Railway Companies, that the public can be secured against high charges by some

endeavoured to point out the fallacies under which it is sometimes contended that the public have no concern in the extravagance of private companies; an extravagance into which the public are mainly instrumental in driving them. Witness the encouragement lately given to competing railways.

Having considered the subject of fares we turn to that of

### *Working Expenses.*

In estimating the probable profits on railways it is customary to take the working expenses at a certain per centage (generally about 40 per cent.) of the receipts.

possible machinery of legislation, or means other than strict economy in the original construction and the subsequent working of railways.

The case of the Blackwall Railway is quoted, which cost 287,000*l.* per mile, and only charges 1*·*6*d.* per mile for the 1st class, and 67*d.* per mile for the 2nd class; and compared with other railways, such, for instance, as the London and South-Western, which cost only 28,000*l.* per mile, or  $\frac{1}{10}$ th of the Blackwall, and yet charges  $\frac{3}{4}$ *d.* more than the Blackwall; and it is attempted from this to show that the original cost of a line has nothing to do with the fares subsequently charged.

Now nothing can be more fallacious than this, as a very slight consideration of the principles which determine railway charges shows.

If railways were perfectly unchecked monopolies restricted by no fear of competition or restrictive legislation, each Company would then have to seek that fare which would produce a maximum revenue, (that is, the fare of maximum effect,) and this theoretical fare would, it is true, have no relation whatever to the original cost.

This is what railways did when the system began, just as a patentee of a new invention guesses at a charge for the use of his patent which shall produce him most money, and they fortunately found that a fare about half that of the stage coaches is that fare of maximum effect, and accordingly charged that fare.

But the condition of unchecked monopoly could only obtain in the infancy of a system.

The success of the invention once established, railways became like any other mercantile undertakings, and the returns on the capital laid out on railways was from that moment determined solely by the peculiar risks or advantages attending the investment comparatively to other investments.

Immediately that this was so, the theoretical fare of maximum effect disappeared from the scene, and Railway Companies could only, and can now only, looking at the question broadly, make such charges as will secure to them the rate of profit which trade sanctions in this particular investment.

The more, therefore, railways cost the greater will be the capital on which such average return or profit will have to be earned, and the greater the returns required, the higher necessarily the charge to those who use the railway. To take a case—

If a certain number of miles of railway cost, in consequence of the expense thrown upon them by Parliament, or the folly of their constructors, fifteen millions, which need otherwise have cost only ten millions, and if 6 per cent. be the ultimate average rate of profit for which people are willing to invest capital in constructing railways, it is clear that the public using this railway must pay more (by three hundred thousand a-year) to pay 6 per cent. on fifteen millions than on ten millions; the same fact is presented in another shape by Mr. H. Williams' Table given above.

From what is stated above as true in the general, it is not to be inferred that economy in railways does not concern the companies as well as the public; the effect of extravagance, of course, falls first and most heavily on the owners of the railways, and although the laws of trade must ultimately vindicate themselves and the charges be determined on the principles explained above, the first projectors of the railways may be ruined in the mean time. The success and profit of each individual Railway Company will therefore depend mainly on the economy of construction and working; but both the public and the proprietors of railways are alike concerned in enforcing that economy.

This mode of estimating is fallacious, as the following statement\* shows. The lines selected represent different classes of railway, namely, railways terminating in London, the Eastern Counties and Great Western Railways, railways in the manufacturing districts, as the Manchester and Leeds and two Scotch railways.

Railway.	Length.	Working Expenses per Mile.	Per centage of Working Expenses to Receipts.
		£	
Eastern Counties.....	114	1,109	44·0
Great Western.....	236	1,418	36·5
Manchester and Leeds .....	61	1,825	32·0 (10 miles on the Midland Railway)
Newcastle and Carlisle .....	65	517	39·3
Glasgow and Ayr.....	51	711	40·0
Arbroath and Forfar .....	15	234	29·0

It will be seen that while the working expenses of the Glasgow and Ayr Railway are only 711*l.* per mile, they amount to 40 per cent. of the receipts, whereas those of the Manchester and Leeds, which amount to 1,825*l.* per mile, are only 32 per cent. of the receipts. An estimate of working expenses on the principle of per centage of the receipts is therefore unsafe.

The amalgamations which have taken place to so great an extent of late years, that there are now only about fifty nominally distinct companies, may be considered to have had some effect on the working expenses, and the first consequence of consolidating two or three companies, each with an independent head office, into one, is undoubtedly to reduce the expense. But as these concerns grow they become, in the course of time, cumbrous, and a subdivision into departments becomes requisite, each of which must have a staff, so that it may be doubted whether, as a mere matter of economy, centralisation will succeed when carried to such an extent as to make it impracticable for any one or two chief officers to exercise personal control over the system.

We will now consider some of the more prominent points of interest connected with the working of railways during the last three years, commencing with *safety*.

#### Accidents.

Year.	Number of Passengers Conveyed.	Numbers Killed or Injured by causes beyond their own control.	Proportion of the Number of Persons Injured to the Total of Passengers Carried.
1842.....	21,358,445	19	1 in 1,124,128
1843.....	25,572,525	6	1 in 4,262,087
1847.....	54,854,019	106	1 in 517,490
1st 6 months of 1848 .....	26,330,492	66	1 in 398,947

The numbers injured comparatively to the whole number of passengers, were thus in 1843, in round numbers, one in upwards of four millions; in the first half of 1848, one in four hundred thousand. The accidents being more numerous in 1848 than in 1843, in the proportion

\* Appendix to Report of Select Committee on Railway Acts Enactments, (687.)

of ten to one, a result to be mainly attributed to the joint operation of express trains running at great speeds very different to those of the other trains, (and therefore disarranging the whole traffic along the line on which they run, see note to page 333,) and of the extraordinary increase of the number of trains. The increased number of trains is the result of the lowering of fares, and the consequent increase of traffic coupled with the extraordinary and often unreasonable demands of late made by the public for more frequent opportunities of travelling. The difference in the number of trains on British and Continental railways is remarkable.

Hitherto, therefore, the demands which the public have so peremptorily urged upon the railway companies, must be regarded as having materially diminished the safety of railway travelling, as experienced engineers predicted they would.

### *Speed.*

The following Tables show the increase of speed in the express, and the average trains as compared with 1843. The lines are arranged in the order of their speed.

#### *Highest Speeds on the Metropolitan Railways. In 1843.—July.*

Name of Railway.	Speed in Miles per hour.	REMARKS.
London and Brighton .....	28·8	(Narrow Gauge.)
Great Western.....	27·4	To Beam Bridge. (Broad Gauge.)
South-Eastern.....	26·6	To Folkestone. (Narrow Gauge.)
London and South-Western	25·4	To Gosport. (Narrow Gauge.)
Eastern Counties.....	25·1	To Colchester. (Narrow Gauge.)
London and Birmingham ....	23·6	(Narrow Gauge.)

#### *In 1843.—June.*

Name of Railway.	Speed in Miles per hour.	REMARKS.
London and South-Western	44·5	To Southampton. (Narrow Gauge.)
Great Western.....	43·8	To Exeter. (Broad Gauge.)
South-Eastern.....	35·2	To Dover. (Narrow Gauge.)
London and North-Western	34·9	To Liverpool. (Narrow Gauge.)
London and Brighton.....	33·6	(Narrow Gauge.)
Eastern Counties.....	31·3	To Cambridge. (Narrow Gauge.)

#### *Average Speed of all the Through Trains (excluding the Express,) of the Metropolitan Railways.*

Name of Railway.	No. of Trains.	Average Speed of all the Trains, excluding Express.	REMARKS.
		Miles per hr.	
Great Western .....	7	25·4	Broad Gauge, 1 3rd Class Train.
London and South-Western	8	23·9	Narrow Gauge, 2 do.
Eastern Counties .....	6	23·3	Narrow Gauge, 1 do.
London and Brighton .....	9	23·1	Narrow Gauge, 2 do.
South-Eastern .....	6	22·7	Narrow Gauge, 2 do.
London and North-Western	7	22·4	Narrow Gauge, 1 do.

I have distinguished in the column of remarks the broad gauge line, the Great Western, from the others, because there appears to be an impression on the part of a portion of the public, that the rate of travelling by express trains\* is greatest on that line; this opinion it will be seen is not borne out by the facts.

It should be borne in mind in considering this question, that speed, as measured in the usual way of so many miles per hour, becomes of less value as regards saving of time, as the velocity increases, for instance, the difference (3 miles per hour) between 50 and 53 miles per hour only makes a difference of  $7\frac{1}{2}$  minutes in accomplishing a journey of 100 miles, but the same difference of 3 miles per hour between 20 and 23 miles per hour, makes a difference in the same journey of 100 miles, of no less than 39 minutes.

The 7,150 miles of railway in course of construction are mainly in the agricultural districts, it may therefore be well to record some facts illustrating

*The Usefulness of Railway Communication to Agriculture†.*

First. As to the saving in driving live stock.

The loss in weight of stock in driving has been calculated‡, as on the average, for driving beasts 100 miles, 5 lbs. per quarter, or 20 lbs. per beast, equal to about 2 per. cent. of the weight.

For sheep, at 2 lbs. per quarter, or 8 lbs. per head, 10 per cent. of weight.

For pigs, at  $2\frac{1}{2}$  lbs. per quarter, or 10 lbs. per head, 5 per cent. of weight.

This loss will of course vary according to different circumstances. I have had no opportunity of determining if the above is a fair average result, but the estimate of Mr. Smith (of Deanston) as regards beasts is higher. Very nearly all this is saved by railway conveyance; what railways can do in this respect may be inferred from the fact, that cattle were lately sent from Carlisle to Norwich, 250 miles, as the crow flies, in a day and night, without taking them out of the truck §.

In the facilities of sending meat, as is already done on a large scale,

In the conveyance of manure, lime, coal, and all the various applications of modern agriculture,

\* Express trains have been generally introduced, (perhaps indeed too generally of late,) for it is notorious that a train travelling at a much higher speed than that of the other train is, of all other arrangements, that most likely to cause derangement of the traffic and accidents. On almost all lines on which there are express trains ordinary trains have to wait at a siding to let the express train pass; if the express is late, as is every now and then the case on a long line of railway, there will be two or three trains containing passengers and merchandise kept waiting in sidings for it, and the whole regularity of the traffic for hours will be deranged. It is evident that in such cases express trains, far from adding to the aggregate accommodation afforded by the railway, must diminish that aggregate.

Still an English public will always feel an interest in anything like a race, and we accordingly find the different rates of the express trains a common subject of interest.

† See a pamphlet entitled "Irish Wants and Practical Remedies," by H. Brown, Esq., M.P., for much information on this subject.

‡ Mr. Hyde Clarke's contribution to Railway Statistics, who derives this estimate from the opinion of Mr. Hindley, M.P., and of other agriculturists.

§ Evidence before Select Committee on Railway Act Enactments, question 3,151 *et seq.*

In the transport of the produce of a farm,

In giving the farmer the command of more markets, and the opportunity of taking advantage of a turn in the market, the uses of railway communication are acknowledged by all agriculturists who have experienced their effects.

As illustrating some of the points, the following extract from the evidence of Mr. Smith, of Deanston, before the Railway Acts Enactment Committee in 1846, is curious.

Statement of the probable Exports and Imports from a farm of 200 acres on a Six Course Shift:—

	Tons.	cwt.	lbs.
IMPORTS.—Lime, Guano, Oilcakes, Coals, &c.	197	15	68
EXPORTS.—Wheat, Turnips, &c., &c.	148	19	35
	346	14	104

*Comparative Estimate of Expenses by Railway and by Common Road.*

Expense of transmitting the probable Exports and Imports for a year from a farm of 200 acres 15 miles by Railway:—

	£	s.	d.	£	s.	d.
347 tons, at 1d. per ton per mile .....	21	13	9			
Say one person travelling by rail for 300 days at 1d. per mile, 15 miles per day .....	18	15	0			
				40	8	9
Expense of transmitting the above by common road, with the exception of 29½ tons of cattle, 317½ tons at 6d. per ton per mile .....	119	1	3			
Expense of cattle travelling by common road .....	3	15	0			
Say one person travelling per day for 200 days at 2s. per day .....	20	0	0			
				142	16	3

Saving effected by railway per annum ..... 102 7 6

Consequently, the rental of such a farm would be, without a railway, 400*l.* per annum, and with a railway, 10*s.* per acre more, or 500*l.* per annum\*.

The following calculation is also added, to illustrate the saving effected by substituting railway conveyance for road conveyance in the exports and imports of one square mile of land. It will be seen, that according to this estimate, this saving is equivalent to 14*l.* per acre.

*One Square Mile.*

Expense of transmitting the probable Exports and Imports from one square mile, or 640 acres, deducting 40 acres for fences, &c.:—

	£	s.	d.	£	s.	d.
By railway .....	121	6	3			
By common road .....	428	8	9			

Saving effected by railway ..... 307 2 6

Thirty years' purchase of the above saving ..... 9,213 15 0

\* "The evidence, not only where reference is made to a recently reclaimed, but also to a long settled district, shows that a constant consequence of improvements in the mode of conveyance has been a steady rise in the amount of rent throughout the district affected." (Poor Inquiry, Ireland, 1836.) Appendix H., part ii., page 39. Remarks on the Evidence, &c., by J. E. Bicheno, Esq., one of the Commissioners.

Such calculations as these are sometimes exaggerated, and must always be modified according to local circumstances, but they are not without use in indicating the manner in which the saving may be estimated.

It is satisfactory also to find that those who have had the opportunity of observation, as, for instance, Mr. Peto, M.P., appear to think well of agricultural traffic, as profitable to the railway. An opinion, which is confirmed by the investigation of Mr. Desart, into whose hands the Belgian Government placed the statistics of their railways, and who found from examination, that the traffic of the small towns and villages along a line, is proportionately greater than the traffic between two large cities at its termini.

These facts appear to be calculated to impart confidence as to railways in agricultural districts, always supposing they are made cheap.

*The bearing of Railways on Local Rates*

Is a point in connexion with this part of the subject, on which interest will be felt in those parts of the country where the introduction of railways is anticipated.

The following Table is compiled from a return given in by the London and Birmingham Railway Company, in 1844, to the Select Committee on Railways.

County.	Rateable value of the land in the different Counties before the Railway came.	Rateable value of the land occupied by the Railway at the average rate per acre of the respective Parishes.	Value at which the Railway and Buildings are assessed.	Rate per mile of Assessment on the Railway.	Per centage of the whole Parochial Rates paid by Railway.	Additional value conferred on the land of the Counties passed through by the Railway at 20 years' purchase of the Annual Rent-charge from which the Railway has relieved the Parish.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£
Middlesex .....	44,778 7 11	240 2 11	21,617 0 0	965 5 0	48 6 0	39,452
Hertford .....	87,591 7 4	460 2 4	20,176 8 7	1,095 7 0	23 0 0	68,118
Buckingham....	52,844 3 8	527 3 8	20,627 0 8	803 10 0	39 0 0	50,706
Northampton ..	48,306 13 11	472 10 11	19,406 1 11	955 0 0	40 2 0	90,410
Warwick .....	75,552 14 2	616 5 2	39,269 13 4	1,388 10 0	52 0 0	83,755
City of Coventry	41,725 12 6	82 12 6	5,500 0 0	1,525 0 0	13 4 0	19,640
Worcester ... ..	15,886 11 1	46 11 1	1,410 18 0	868 0 0	9 0 0	2,556
Total .....	366,685 10 7	2,445 8 7	128,007 2 6	1,085 13 0	32 per ct.	354,637
			Average			

In this case we see that the land, which before it was occupied by the railway, was only valued at 2,445*l.*, after the railway was established, was rated at 128,007*l.* Also that this railway paid 32 per cent., or one-third of the whole rates of the parishes it passed through, although it did not add in any degree to the burdens of the parish, inasmuch as it afforded regular occupation to all its servants.

*Mechanical Improvements.*

*The Electric Telegraph* has, during the last three years, been widely adopted as an auxiliary to the railway system. In 1839, it was laid down between London and Slough, on the Great Western Railway, but in 1843, I think it had only been adopted there and on the Blackwall Railway; since 1843, however, it has been extended over 1,800 miles of railway, (that is, over about half the railways open) and it is in daily course of further extension.

We are, therefore, indebted to our railways for the general extension of this most beneficial application of science to art.

The electric fluid itself passes along the wire at a computed rate of 280,000 miles per second, the distance, apart from the points of communication, has, therefore, no appreciable effect on the time of transmission of the message, which depends on the perfection of the mechanical means of spelling and reading at either end of the line. The rapidity of communication with which a message is practically transmitted, appears from the following facts, kindly furnished to me by Mr. Hatcher, the manager of the central establishment of the Electric Telegraph Company in Lothbury.

The average number of words in the messages from London to the North, are 198.

The average rate of spelling by the telegraph is 55 letters, or 10 words per minute.

Average time, therefore, of transmitting each message, 20 minutes.

The Queen's speech of 750 words, thus occupied in the transmission, 1 hour 15 minutes.

*The Atmospheric Mode of Traction,*

As applied to railways by a partial vacuum, formed by a stationary engine in a tube, within which a piston drawing the train, travels, was tried on the Dalkey Railway, near Dublin, (a little more than one mile in length) in 1844, and subsequently on the Croydon Railway for six miles; it still works satisfactorily, it is said, on the Irish line, but at Croydon it did not apparently, in the opinion of the managers of that railway, realize the advantages anticipated from it, and being expensive, it was abandoned, the line having been since worked by locomotive engines. On the South Devon Railway, an atmospheric pipe has been partially laid and is still at work, and from the well-known resource and skill of the engineer, who has recommended its application there, we may be sure that it will receive a fair trial.

On the other hand, the locomotive engine has been of late successfully applied to inclined planes, formerly worked by stationary engines and ropes.

*The Question of Gauge.*

This question has excited much interest within the last 3 years, in consequence of the lines of different widths (the one dimension being 7 ft. the other 4 ft. 8½ in.) coming in contact with each other at Gloucester, and the evils of having two gauges becoming, in consequence of this, manifest.

A Royal Commission was appointed in 1845, to inquire into the

subject; they examined 46 witnesses, comprising all the most experienced engineers and managers of railways in the country; of these 46 witnesses 39 expressed strong opinions in favour of the necessity of uniformity of gauge, by the universal adoption of the ordinary gauge of 4 ft. 8½ in.: 3 expressed no opinion on that part of the subject, and 4, namely, Mr. Brunel, the engineer, who first adopted the gauge of 7 ft., and his three colleagues, officers of the Great Western Railway Company, contended that uniformity of gauge was not important, and that the 7 ft. gauge was the preferable dimension.

The Commissioners summed up their views as follows:—

1st. “That as regards the safety, accommodation, and convenience of passengers, no decided preference is due to either gauge, but that on the broad gauge, the motion is generally more easy at high velocities.

2ndly. “That in respect of speed\*, we consider the advantages are with the broad gauge; but we think the public safety would be endangered in employing the greater capabilities of the broad gauge much beyond their present use, except on roads more consolidated and more substantially and perfectly formed than those of the existing lines.

3rdly. “That in the commercial case of the transport of goods, we believe the narrow gauge to possess the greater convenience, and to be the more suited to the general traffic of the country.

4thly. “That the broad gauge involves the greater outlay, and that we have not been able to discover, either in the maintenance of way, in the cost of locomotive power, or in the other annual expenses, any adequate reduction to compensate for the additional first cost.

“Therefore, esteeming the importance of the highest speed on express trains, for the accommodation of a comparatively small number of persons, however desirable that may be to them, as of far less moment, than affording increased convenience to the general traffic of the country, we are inclined to consider the narrow gauge as that which should be preferred for general convenience.

“That as any junction to be formed with a broad gauge line, would involve a break of gauge, provided our first recommendation be adopted, great commercial convenience would be obtained by reducing the gauge of the present broad gauge lines, to the narrow gauge of 4 ft. 8½ in., and we therefore think it desirable that some equitable means should be found of producing such entire uniformity of gauge, or of adopting such other course as would admit of the narrow gauge carriages passing without interruption or danger along the broad gauge lines.”

The feasibility of this recommendation is apparent, from the following statement of the proportional lengths of lines of the two different gauges now open.

Miles of Railway on  
Ordinary Gauge  
of 4 feet 8½ inches.  
3,200

Miles of Railway on  
Exceptional Gauge  
of 7 feet.  
375

\* As regards speed there appears to be some misapprehension on the part of the Commissioners; in the table of speed, at p. 332, we see that the narrow gauge express trains are faster than those on the Great Western (broad gauge) line. The impression as to the superior speed of the broad gauge has probably arisen from the fact that the Great Western line out of London to Swindon is much the flattest and straightest in the country, consequently much the highest speed is attained there.

The proportion of narrow to broad gauge railway, is then nearly as nine to one, and when the railways now in course of construction are completed, the disparity will be still greater. Under these circumstances it is clear, that if either gauge is to be altered, it must be that of which there is comparatively so much the shorter length laid.

The Commissioners adopt an estimate of one million of money as the cost of the alteration, which it seems could be effected without stopping the traffic, as was done on the Northern and Eastern Railway.

It is to be regretted that this is not done at once, before the evil and its attendant expense have gone further, as the attempt to compromise the question is leading to great expense, and to the adoption of an unsound mode of railway construction called the mixed gauge\*, which is not only expensive, but less simple and safe than the ordinary form of railway on either gauge singly. This is especially objectionable, as all such expense must, as we have seen, ultimately fall on the public in the shape of charges, and *pro tanto* diminish the usefulness of railways.

A break of gauge is, in short, an obstruction, and as has been well said, "the common sense of mankind teaches them to remove obstructions from their roads." In peace it is a nuisance and expense, and in war, in the opinion of the commissioners, founded upon the evidence of the highest military authorities†, "it might expose the country to serious danger, by delaying the concentration of our forces."

### *Railway Clearing House.*

Nothing more clearly shows the necessity of co-operation and unity of arrangement in the railway system, whether as regards gauge or other matters, than the operations of the railway clearing house‡, which was established in 1842, and is every year felt to be more useful.

The clearing house was established with the view of facilitating the transfer of wagons containing merchandise, or of carriages containing passengers, from one line to another.

The carriages and wagons of each railway circulate over all the railways on the same gauge. From each station in the country, a return is sent to the clearing house of all the wagons, and carriages despatched to any foreign line, or received from any foreign line. By these means, an account is kept by the clearing house as between the various companies, and is settled without difficulty by an exchange of cheques at the end of the month. This is, as is well known, the same in principle as the system adopted between the London banking houses.

The system is now extended to goods and to "passengers booked through" to other lines.

\* See a letter to Lord John Russell, M.P., on the Mixed Gauge, by Joseph Locke, Esq., M.P., (the well-known Engineer). Mr. R. Stephenson has also expressed similar opinions; he calculates the additional expense of a mixed gauge over an ordinary single gauge railway as 6,000*l.* actual outlay, and 500*l.* additional annual working expense; an addition (capitalising the annual charge of 500*l.*) equivalent altogether to 18,500*l.* per mile for a less safe railway than the ordinary single gauge form of construction.

† The Quarter-Master General Sir Willoughby Gordon and the Inspector-General of Fortifications, Sir John Burgoyne. (See Evidence before Gauge Commissioners.)

‡ Origin and Results of the Railway Clearing House, by K. Morison, (Manager).

By this means, on railways, the carrying stock becomes so far as is necessary for convenience, common property, and each party using his neighbour's stock, pays according to the use he has of it.

So much is this done, that I have seen at Gloucester the station full of wagons, bringing goods from, or taking goods from almost every line in the country, not one of the Gloucester Company's own wagons being to be seen, they having been in turn sent laden to other lines.

This arrangement seems very simple, nevertheless it was long before it was adopted, and the extent to which it is useful may be judged of by the following return.

*A Return of the Number of Loaded Carriages, Trucks for Private Carriages, Horse-Boxes, Post Office Carriages, and Goods' Wagons, (which went through without the lading being disturbed,) on the Lines of the Railway Companies, parties to the Clearing Arrangements in the year 1845.*

Carriages.	Trucks for Private Carriages.	Horse-Boxes.	Post Offices.	Goods' Wagons.
59,765	5,813	7,573	2,607	180,606

### *Railway Mania.*

This may be said to have commenced in the year 1844, and to have reached its height in 1845. On the 17th November, 1845, the Times published a list of projects comprising 1,263 railway companies, proposing to raise capital to the amount of five hundred and sixty-three millions. Many of these, of course, were mere bubbles, but there were actually presented to Parliament, in the session of 1846, 561 Railway Bills, and Parliament actually sanctioned in that year 4,600\* miles of railway, and authorized the raising of capital on the shares of the companies, to the amount of one hundred and thirty-two millions.

It is scarcely credible that even this did not subdue the fever, which ran on through 1846, and did not die out until the latter part of the year 1847.

The legislative results were as follows:

During the years 1845, 1846, 1847, the Royal Assent was given to Bills, authorizing the construction of 8,900 miles of railway, requiring a capital of more than two hundred millions, of which more than thirty millions is destined to compensation to landowners for land taken by the companies.

In the year 1847, the calls of the English†, Scotch, and Welsh Railway Companies, amounted to thirty-four millions, of which probably twenty-five millions were raised and spent during that year.

The extravagant waste of money in the parliamentary contests upon the Bills, is not the least painful feature of the case.

The deposits with the Accountant-General, for 1845 and 1846, were 18,647,701*l.* Those for 1847 I have not been able to obtain, they must, together with those of 1846, have amounted to not less than twenty millions. Of these, probably not as much as one-half has found its way back into the pockets of the depositors.

\* Return, House of Commons, (1847) 708.

† The calls on Irish railways were 1,900,000*l.*, foreign railways 6,700,000*l.*; in all forty-three millions in one year, 1847.

More than *ten millions* has thus been thrown away for parliamentary inquiries and parliamentary contests during these three years, and the greater part has been saddled on the railways sanctioned, for which the public will have permanently to pay interest, in the shape of higher charges and fares.

This completely eclipses the 200,000*l.* parliamentary expenses of the London and Brighton Railway, which used to appear enormous.

The fluctuations in the price of railway shares during this period, were as follows\* :—

Railway.	July, 1844.		July, 1845.		July, 1846.		July, 1847.		July, 1848.	
	Paid.	Price.	Paid.	Price.	Paid.	Price.	Paid.	Price.	Paid.	Price.
Great Western.....	£ 70	£ 125	£ 80	£ 205	£ 85	£ 150	£ 85	£ 117	£ 90	£ 87
London and Birmingham	100	218	100	243	100	225	100	183	100	121½
Midland Stock .....	100	95	100	187	100	151	100	130	100	101½

These premiums, varying from nothing to 125*l.* on the Great Western shares, from 20*l.* to 140*l.* on the London and North Western, from a discount to a premium of 80*l.* on the Midland, are from half-yearly averages; be it remembered, the extreme fluctuations must have been even greater than this.

### *Railway Legislation.*

It is not within the province of a statistical inquiry to treat of the want of good faith or of any definite principle which has characterized our law-making on railways. Our railway system may, without exaggeration, be said to have arisen in spite of the legislature.

The prodigious expense attending our system of parliamentary inquiry is impressed upon my mind by the following fact within my own knowledge, that upwards of 800,000*l.* has, in one district†, been spent in parliamentary surveys and contests, the results being 350 miles of railways, by no means laid out in the most judicious way; the parliamentary expenses will, therefore, in this case, exceed the cost of the iron rails themselves on the lines finally passed.

The capriciousness and uncertainty of parliamentary tribunals, are shown by the following facts‡.

Of 18 Bills rejected by certain Committees of the Commons in 1845, seven were passed by other Committees when brought forward again in 1846.

Of 6 Bills rejected by certain Committees of the Lords in 1845, four were passed by other Committees of the Lords when brought forward again in 1846.

Six Bills were passed by the Commons in 1845, but rejected on precisely the same evidence in the Lords in the same year.

\* "Tuck's Shareholder's Manual," 1848.

† That between Gloucester, Wolverhampton, and London.

‡ See Mr. Shaen on Railway Legislation (Pickering, 1847,) for curious information on this subject.

The treatment of the Board of Trade Reports in 1845, is of the same character.

Parliament, in 1845, called in as assessors, the Railway Department of the Board of Trade, and required their opinion on the schemes before Parliament: that department accordingly divided the railways into several groups, and reported upon them.

Parliament, however, overset the recommendation of its own assessors with regard to the first and principal group that came before it, and proceeded to do the same in the case of the five other principal groups of lines reported upon.

It is obvious that no confidence can be placed in the judgment of a tribunal, the proceedings of which are so inconsistent as this, and it is difficult to conceive why railway bills are passed before two tribunals (Lords and Commons) composed of inexperienced persons, at an enormous expense, instead of before one experienced and competent tribunal, or why members of the legislature submit to sit for days and weeks in judgment on technical matters on which their training does not qualify them to give an opinion.

### *The saving effected by Railways*

Is a point we sometimes hear debated, and it may be well to attempt a rough computation of it.

Railways save time, and time with an industrious people like our's, is another word for labour, which is the source of wealth, to save time is therefore to increase wealth, but this we cannot bring to the test of figures, as we cannot tell what proportion of railway passengers occupy their time profitably to the country.

If we were to take the test of fares, indeed, as some would contend we should, seeing that the fares by former modes of travelling were double the present railway fares, and that 4,998,000*l.* was spent on railway travelling in 1847, the saving might in this way of regarding the question, be estimated as equal to this sum; but let us confine the calculation to the saving in connection with the transport of goods, coal, and cattle, where the data are more certain.

There have been conveyed during the last year, as we have seen, seven million tons of goods.

The value of these goods will be not less than 100 millions; the value of the goods in transit daily cannot therefore be less than 300,000*l.*

Calling the average time of goods in transit by railway 1 day, and by the former modes of conveyance 3 days, it follows that there must be a saving on the value of the goods in transit at any one time of 600,000*l.*, due to the rapidity of railway conveyance.

This amount of capital is released by railways, and instead of being unproductively locked up in the shape of goods in transit, it is free to be invested reproductively in the transactions of commerce.

The charges for goods have been, during the year 1847, 1,900,000*l.*, taking the railway charge as three-fourths of the charges by former modes of conveyance, here is a further saving of 666,000*l.*

Eight million tons of coal have been conveyed during the year; taking the saving of railway conveyance at only 2*s.* per ton, here is a saving of 800,000*l.*

The same principles of calculation might be applied to cattle, sheep, and pigs.

I have endeavoured to avoid anything like exaggeration in this rough estimate, and from these figures, I think it appears, that in the transport of goods, coal, and cattle traffic, there is already a direct saving to the nation of more than two millions annually, due to the introduction of railways.

The revenue at the same time, it will be seen from the following figures, has been a direct gainer by railways.

In the following statement, the branches of the revenue which may be considered as most likely to have been affected by railway, namely: the stage-coach duty, the tax on carriages, the post-horse duty, and the tax on horses, are compared in 1834 (before any of the large towns, except Liverpool and Manchester, were joined by railway) and in 1845, when railways were laid on almost all the main routes.

	1834.	1845.
	£	£
Stage Coach Duty .....	445,641	431,371
Post Horse Duty .....	215,682	176,618
Horses, Tax .....	414,257	307,122
Carriages, Tax .....	406,487	421,127
	1,482,077	1,336,231
Railway Passenger Duty ....		250,000
		1,586,238

The result it will be seen is, that the stage-coach duties are about the same in amount as before railways were introduced, and that the tax on carriages has increased, but that the taxes on horses produce less; whether these results are to be entirely attributed to railways or not, I do not know, but it will be seen, that the total falling off in these items (146,000*l.*) is more than covered by the railway passenger tax, which has produced 250,000*l.* last year, so that the revenue is a gainer by the exchange.

*Conclusion.*—The result of the preceding inquiry is, it appears to me, on the whole, satisfactory. The railway system has doubled itself in the last three years. Fares have been greatly reduced—the number of 3rd class passengers, the majority of which are of the working class, has largely increased. The importance and value of the traffic in goods and cattle, which may be much farther developed than it has been, has become more apparent, relatively to the passenger traffic. The number of trains is greater—the speed of some of those trains has been accelerated, and all this has been effected without any falling off in the average receipts on each mile of railway in working, but with an increase, probably sufficient or nearly so to meet the increase in the working expenses attendant on the increased accommodation now afforded. Whatever falling off in dividends there may have been is, therefore, hitherto to be attributed, in a general view of the subject, to

additions to the trunk lines required in order to meet the increased quantity of traffic consequent on the lowering of fares, to the capitalisation of loans, and the creation of fictitious capital, principally by the purchase of railways at premiums, and therefore at sums beyond what they actually cost. These being profitable operations when shares were high, were pushed to such an extent, as now to press severely on the original share capital of railway companies.

The great evil of the last three years, is the extravagant outlay of money which has taken place—an outlay, which instead of being checked by the legislature, has been encouraged to the utmost by the mode of legislative inquiry adopted. This has inflicted on the railway system a burden which it will never be able to throw off, and which the public will always have to submit to a higher rate of charge for conveyance than would, with common prudence, have been necessary. It only remains to stop this extravagance with a strong hand. The very existence of the railway companies depends on the economy they can practice in making and working their railways—and nothing, which on the face of it, involves increased outlay—be it diversity of gauge and its consequence the mixed gauge, or be it under the more plausible plea of competition, should be countenanced either by railway companies or the legislature, if we wish to secure for ourselves the full fruits of that admirable invention, which England and the English engineers, who have followed in the steps of George Stephenson, have given to the world.

### *Railway Accidents.*

By an Analysis of the Returns made to the Railway Department, it appears that of the 90 persons killed and 99 injured, on all the Railways open for public traffic in Great Britain and Ireland, during the half-year ending the 30th June, 1848, there were—

6 Passengers killed, and .....	60 injured from causes beyond their own control.
5 Passengers killed, and .....	2 injured, owing to their own misconduct or want of caution.
7 Servants of Companies or of } Contractors killed, and .... }	14 injured from causes beyond their own control.
52 Servants of Companies or of } Contractors killed, and .... }	18 injured, owing to their own misconduct or want of caution.
18 Trespassers and other persons, } neither Passengers nor Ser- } vants killed, and .....	5 injured by improperly crossing or standing on the railway.
1 person run over and killed, at a crossing, through misconduct of an engine-driver.	
1 suicide.	

TOTAL..... 90 killed.

99 injured.

And for the same period the number of passengers amounted to 26,330,492.

*Contributions to Academical Statistics*, by PROFESSOR  
POWELL, F.R.S.,

[Read before the Statistical Section of the British Association at Swansea, 10th August, 1848.]

THE annexed table of matriculations, examinations, degrees, and honours, in the University of Oxford, is a continuation of similar ones given in former reports of the Association, (1839, *Sect. Proceedings* p. 119, and 1842, ditto 100.) It differs from them only in the omission of the columns containing the *degrees*, from which, as being merely formal, no material conclusions can be derived; and in the insertion of the examinations for *each half year*, with a separate column of the number of those who *did not pass*: unfortunately no record exists by which can be ascertained the proportion of those who were *rejected*, and those who from various causes (as illness, &c.), voluntarily *withdrew*. The general results are very nearly the same as in former instances.

Year.	Matri- culated.	Candidates for Examination for B.A.	Total passed.	With- drawn or Re- jected.	Obtained Honours.			With- out Ho- nours.
					Clas- sical.	Mathe- matical.	Both.	
1842	379	{ Easter 215	154	59	51	14	10	99
		{ Michs. 202	137	65	41	13	6	89
1843	390	{ E. 217	159	58	47	11	7	108
		{ M. 192	119	43	51	11	5	92
1844	398	{ E. 206	150	56	43	11	5	101
		{ M. 202	144	58	36	15	4	97
1845	438	{ E. 219	167	52	46	19	10	112
		{ M. 179	131	48	38	17	6	82
1846	411	{ E. 197	142	55	46	14	6	88
		{ M. 187	140	47	53	8	2	81
1847	406	{ E. 186	152	34	49	18	9	94
		{ M. 146	136	10	42	11	6	89
Yearly mean	402.8	— 393	293.5	100.5	82	27	12.6	194

*Moral and Educational Statistics of England and Wales.*

By JOSEPH FLETCHER, Esq., *Hon. Sec.*, *Statistical Society of London.*

[Read before the Statistical Section of the British Association at Swansea,  
14th August, 1846.]

For any statistical evidence which has yet been adduced, the *relative* proportions of ignorance and of instruction to be found amongst those brought before the criminal tribunals of their country may be the same that exist among the population at large; and the mere *positive* excess of ignorance *within* the gaols if the same exist without their walls, affords no evidence whatever in favour of the moral effects of "education as defined in the criminal returns. By comparing the proportion of the population in gaol with the proportion unable to write in each district, one with another, we have arrived, however, at a statistical proof of the immediate connexion between the proportion of instruction and of criminal offences\*. This one fact does but awaken our desire for further analysis, to detect, then, how this superior amount of instruc-

\* *Journal of the Statistical Society*, vol. x., p. 193.

tion among the population at large evinces itself in the degree of instruction found among the criminal portion of it, reduced as its total amount is by the presence of such instruction; and to ascertain, by this means, with what degree of technical instruction there is associated, in most cases and however indirectly, that superior degree of moral strength which protects from the grosser forms of misconduct.

To this end it will be useful to examine—

1. Whether the decline of ignorance, thus tested, among the population at large, be accompanied by precisely the *like* decline within the gaols or show itself in some more remarkable manner. (Appendix I.)

2. Whether there be any remarkable progress or decline in the proportion of persons of each degree of instruction appearing before the criminal tribunals of their country, in a series of recent years. (Appendix II. and III.)

These inquiries will necessarily be irrespective of the *total* number of criminal commitments in the several years under examination, which exhibited an increase in a proportion much beyond that of the population for a long series of years down to 1842. The important decrease in the three succeeding years, from 31,309 in 1842, to 29,591 in 1843, 26,542 in 1844, and 24,303 in 1845, has been the subject of special observation; being the first continuous diminution of commitments that occurred in the course of forty years. In 1846, however, there was an increase to 25,107, and in 1847 to 28,833, being an increase of no less than 14·84 per cent. on the year, occurring in all the most populous districts of the realm.

In making the comparison between the degrees of ignorance which prevail among those committed for criminal offences and among the population at large respectively, we must assume that the test by which the class of those who are able “neither to read nor write” is formed among the former, is in effect, nearly identical with the marriage register test; and not only the near approximation of the results, but the general sensitiveness with which they coincide in every country and district, affords strong evidence that this assumption is well founded. The general result is, that the proportion of males in England and Wales who sign the marriage registers with marks was 33·6 per cent. in 1839-40, and 32·4 per cent. in 1841, being a decline of 1·2 per cent. in three years and a-half; while the proportion found unable either to read or write among those committed to assizes and sessions in 1837-8-9 was 34·4 per cent., and in 1842-3-4, 31·3 per cent., being a decline of 3·1 per cent. in five years, upon a proportion somewhat in excess of the like ignorance witnessed in the population at large, but one showing double the rate of decrease. These numbers, then, afford but feeble testimony in favour of much of the instruction which is now being given, and which has sufficed to place all the rest of the persons committed in classes in which they are described as being at all events able to write, though imperfectly.

The equability between the proportion utterly uneducated in the commonest arts of scholarship, in and out of gaol, in the kingdom at large, is, of course, equally found in many of its provinces, but there is a double deviation from it which indicates a general cause of extensive operation. In the *least* educated districts the proportion wholly uneducated among the persons committed for trial is *less* than among the population at large; while in the *most* educated districts the proportion

of the wholly uneducated among the persons committed for trial is proportionally above the average. As this appears, in the southern parts of England, chiefly by comparison between the metropolitan and the midland counties, it might admit of complete explanation by supposing that many of the most ignorant and dissolute of the rural population, finding their way to the metropolis, there entered the latter stages of an unhappy career. But this will not explain the relative excess of the totally ignorant appearing in the criminal calendar of Rutlandshire, the only one of the midland counties remarkably advanced in popular education, nor the coincidence of the like phenomenon with the superior instruction of the East and West Riding of Yorkshire, of Cumberland, of Northumberland, and of Durham. Migration of the poor, ignorant and depraved *into* these regions appears to be very improbable; neither is there any conceivable *emigration* of such persons to account for the proportionate defect of the wholly uninstructed in Monmouthshire, South Wales, or Cornwall, or in the whole of the most ignorant and densely populated of the manufacturing counties of Cheshire, Lancashire, the West Riding, Staffordshire, and Worcestershire. In other words, the proportion of the wholly uneducated in gaol is *less* than the proportion of the population at large equally in the *most purely agricultural* districts of the south and east, and in the *most purely mining and manufacturing* districts of the north and west, which are respectively the most *positively* ignorant and criminal; while in the most instructed counties, whether of the north or the south, and whether metropolitan, agricultural, mining, or manufacturing, the converse is seen.

The only explanation of this fact which suggests itself to my mind, is, that there is no less difference in the *quality* than in the amount of instruction given in the most and least instructed portions of the kingdom respectively; and that is only a degree of careful uprearing of the young, far higher than that which can be tested by the lowest attainments in reading and writing, that is alone blessed to the good end of righteous living in a Christian hope. It is the abstraction of a greater number of the instructed from the criminal calendars of the better educated districts which there throws the *proportion* of the totally ignorant into excess; and the inferior character of the instruction given in the worse educated districts, which permits a greater number of the instructed to appear before the criminal tribunals, to the reduction of the *relative* proportion of the wholly ignorant comprised in the calendars. Thus regarded, these figures tend greatly to strengthen the impression which I have derived from other sources, that around the moderate amount of really efficient instruction and really Christian training which prevails even in our best educated districts, there exists a wide margin of spurious schooling, without any good effect either upon the intellect or the heart; and that in the remotest of the agricultural, as of the mining and manufacturing districts, it is this doubtful twilight that generally prevails, with no compensating superiority of vigorous education among the middle and upper classes. Hence it results that the difference in the amount of education, in any rational sense of the term, between one portion of the kingdom and another, is far *greater* than that indicated by the varying proportion which the marriage registers show to be unable to write at all; while as yet we have no test that, for the population at large, will check against the gaol returns of those who can read and write imperfectly, "and read

and write well." If we had a test of the latter range of scholarship for each county in the population at large, it is my conviction that it would furnish far stronger evidence in favour of good education, than that which we are now permitted to derive merely from a comparison of the numbers wholly uneducated that appear in the marriage registers and in the criminal calendars.

Let us, however, return to the comparative progress of "education" up to the mark of bare reading and writing (since even good people will call it such) among the population at large and those brought up before the criminal tribunals of their country. Here, also, we see a great number of curious coincidences in the contemporaneous increase of marks in the marriage registers, and of the proportion of persons able neither to read nor write in the criminal calendars of the country or district. There are likewise some anomalies, but the general result is a decrease of the proportion wholly uneducated in the criminal calendars at double the rate that it is found to decline in the marriage registers, after reckoning for the difference of the intervals between the data yielding the figures now compared. The decline is scarcely perceptible in the western Celtic districts, and, next to them, it is least observable in the great northern and central mining and manufacturing counties, where it has declined only one-thirteenth in five years, while in all the rest of the kingdom it has declined about one-tenth, except in the northern and midland agricultural counties (*contiguous* to the comparatively stationary mining and manufacturing counties), in which it has declined upwards of one-seventh. We thus find the decline of *total* ignorance to be slowest in the most criminal and the most ignorant districts, in which nevertheless its decline among those in gaol is greater than in society at large; everywhere indicating the very doubtful quality of a great proportion of that which barely helps its recipients out of the category of the totally ignorant.

The two least criminal regions are at the opposite extremes in this respect (the Celtic and the Scandinavian), with this important difference, that in the region where there is the greatest decline of absolute ignorance among the criminals (the Scandinavian), there is not one-half of the amount of it in the population at large which exists in the other, while the considerable *proportion* which the uninstructed still bear to the instructed is bolstered up by the far more rapid decline in the proportion of those who "read and write well" in the counties of best instruction; a decline greater than in any other districts, and five times as great as in the Celtic regions, with which we are now comparing them.

The decline in our gaols, in five years, of those who can neither read nor write, is seen in some counties to be remarkably great, and its augmentation, in seven out of the eight cases in which it occurs, is associated with a retrograde movement in the instruction of the population at large, or a general excess of crime, as in Dorsetshire, Devonshire, Bedfordshire, Buckinghamshire, Cumberland, Staffordshire, and Leicestershire; evidence at once of the near connexion of these columns of figures with each other, and the hopelessness of any reliance on absolute ignorance, or a cessation from the advancement of instruction altogether, for a cure of existing evils. South Wales presents the only case of an increased proportion of utterly ignorant criminals without any excessive amount of crime, and with a decreased proportion of "marks" in the

marriage registers; another coincidence, which, with that of the seemingly wonderful decline in bastardy with the changed registry of births, strongly induces me to suppose that there is some unexplained peculiarity in the social circumstances of this region, which affects the present registry of births and marriages, as compared with its operation when in the hands of the clergy. A comparison of the proportions per cent. above and below the average of all England and Wales, in each county and district, of the number of mark-makers in the marriage registers, and of those unable to read and write in the criminal calendars, show less variation between each county and district in the latter than in the former, on account of the compensating influences already described. Their general coincidence, however, is not the less observable.

Unable to pursue any further the comparison between the instruction which prevails amidst the population at large, and that found among persons brought up before the criminal tribunals, it remains only to call attention to the analysis of the instruction found amongst the latter only, contained in Appendix II, for the period of five years, to which all our observations have hitherto been limited, with the duplicate, Appendix III., which brings the same analysis down to the present time. It is only from the lowest and most neglected portions of society that the wholly uneducated criminals are derived. Those who "read and write imperfectly" will be variously derived from all the labouring classes, except a portion of the skilled artisans, whose children learn to "read and write well," or at all events, as well as those of the humbler middle classes generally. Reading and writing well, however, is not yet a scale of accomplishment that characterises any class below this.

The proportion of criminals "reading and writing ill" is thus seen to be now precisely double that of the criminals "unable to read and write," having increased no less than 5·7 per cent. in the first period of five years and 4 per cent. during a subsequent period of three years, making a total of 6·1 per cent. in the eight years. The class of "superior instruction" being very limited (in fact, in the centesimal proportions, always under a whole figure), and likewise unvarying, this increase must necessarily be derived from only one other of the four classes, besides those who can neither read nor write. From this we have seen that there is a subtraction of 3·1 per cent. in five years and 1·1 per cent. in three more, making a total of 4·2 per cent. out of the 6·1 per cent. of augmentation observed in the column of "reading and writing ill." The other 1·9 per cent. is derived from the column of "reading and writing well," in which the decline during the first five years was no less than 2·6 per cent., but a retrograde movement during the last three years has reduced this proportion to 1·9.

It is, however, to this heading that I would call especial attention, for this alone affords evidence, both conclusive and satisfactory, of a moral progress. A gradual change in the standard designated "reading and writing well" could alone account for this decline of one-fifth in the proportion of those possessed of this amount of instruction; but I would fain hope that it is a correct indication of a real improvement in the moral tone of the middle classes generally, springing from the source of all truth and all goodness. Even if any portion of it arise from a practical elevation of the standard designated by the heads of each column, this fact will only render still stronger the conclusion

already drawn from the increased proportion of those reading and writing ill, which would have been yet greater, but for the retention of some that might have been included in that column in the number of the totally uneducated.

The proportion of persons of superior education committed for criminal offences, always very small, has undergone no change in the kingdom at large in the period under consideration; it amounts in the whole only to  $\frac{1}{4}$  per cent., or 1 in 250; but we have no statistical evidence to the proportion of persons in the population at large, of an age to be committed for crime, who could be designated as possessed of "superior instruction." It is probably not so small, but in the absence of the ascertained fact the positive smallness of the number under this head affords, in its stationary character no *statistical* evidence in favour of or against the moral effects of superior education."

In the use of these or any other statistics of instruction, I hope it is scarcely necessary to add that they are regarded only as indications of the probable existence of that amount of Christian knowledge and advancement which should be the concomitant of instruction in a professedly Christian country, and can seldom, in the present state of society, be found wholly without that instruction which is always accessible to, if not already possessed by, an awakened mind. Mere intellectual excitement in any class does little for morality, and nothing for peace and happiness, if it do not lead to the "beginning of wisdom," and that practical humility, guided by consistent thought, which will evince its attainment. But shall we, therefore, withhold the human means most conducive to the attainment of these higher gifts, which it has pleased God to place in our hands, merely because in some minds there is an empirical tendency to look for an immediate and local result of every direct and local application, however intimate and uninterrupted may be the connexion between the phenomena to which it is applied and the whole moral being of society, and however remote the quarter in which a result, with a more extended knowledge of the human heart and of human society, ought rationally to have been expected?

In the Criminal Returns, for instance, the effect of extended and improved education among the poor, in so far as it can be detected in the criminal calendars, regarded as an index to the moral tone of society generally, ought to be seen, not in the diminished proportion of the lowest classes to whom we have been labouring to give some defective scraps of instruction under the name of education, but in the diminished proportion of all classes brought to the bar of justice. This we were seeking, with the most satisfactory results, on a former occasion, when our figures proved, I think, that, *ceteris paribus*, the amount of education actually associated with some of the small amount of instruction which is now being disseminated, is sufficient to produce a marked result upon the moral character of society at large, wherever it is in considerable excess, accompanied, as it will be, by a higher cultivation among the middle classes, and probably even among the higher. This is the best evidence that criminal calendars can afford us in favour of education, and it will remain unimpugned, unless further analyses shall subvert existing data by showing that of the offences here thrown all together there is an excess of the *grosser* in the more *cultivated* districts, which is inconceivable.

APPENDIX I.—*Progress of Popular Education in Five Years, from 1837-8-9 to 1842-3-4, shown by a comparison of the proportions of Criminals who could neither Read nor Write, with the numbers who signed the Marriage Registers with Marks.*

COUNTIES AND DISTRICTS.	Population in 1841.	Proportion per Cent. of the Men Married in the Year ending with Marks		Excess or Deficiency of the Men Signing the Mar- riage Register with Marks in 1844, as compared with 1839-40.	Proportion per Cent. of Men Signing the Mar- riage Register above and below the Average of all England and Wales upon the like Num- ber of Marriages.	Proportion per Cent. of Male Criminals who could neither Read nor Write,		Excess or Deficiency per Cent. of Male Criminals who could neither Read nor Write in the former as compared with the latter period.	Proportion per Cent. of Male Criminals who could neither Read nor Write above or below the average of all England in 1842-3-4.
		June 30, 1840.	Dec. 31, 1841.			1837-8-9.	1842-3-4.		
<b>I. Southern Agricultural and Maritime Counties.</b>									
<b>I. A. Counties of Least Instruction:—</b>									
Sussex .....	299,753	33.	30.	-3.	-7.5	36.6	31.0	-5.6	-8
Hants .....	355,004	32.	29.	-3.	-11.1	34.1	26.4	-7.7	-15.7
Dorset .....	175,043	34.	36.	+2.	+10.1	31.5	37.3	+5.8	+19.3
Total—Least Instruction .....	829,800	32.6	30.5	-2.1	-5.9	34.5	30.0	4.5	-4.3
<b>I. n. Counties of Most Instruction:—</b>									
Kent .....	548,337	28.	27.	-1.	-17.1	38.3	33.1	-5.2	+5.8
Devonshire .....	533,460	28.	29.	+1.	-11.9	23.0	27.1	+4.1	-13.4
Total—Most Instruction .....	1,081,797	27.8	27.8	...	-14.3	32.8	30.7	-2.1	-1.7
Total Southern Agriculture and Maritime Counties .....	1,911,597	29.8	28.9	-0.9	-10.8	33.6	30.4	-3.2	-2.9
<b>II. South Midland and Eastern Agricultural Counties.</b>									
<b>II. A. Counties of Least Instruction, being the Eastern Counties:—</b>									
Suffolk .....	315,073	48.	46.	-2.	+42.0	39.7	35.2	-4.5	+12.4
Cambridge .....	161,459	48.	43.	-5.	+33.5	32.7	29.4	-3.3	-6.1
Norfolk .....	412,664	45.	45.	...	+38.1	39.2	38.2	-1.0	+22.1
Essex .....	341,979	50.	46.	-4.	+42.4	43.0	42.0	-1.0	+34.0
Huntingdon .....	58,519	46.	45.	-1.	+38.0	46.7	36.3	-10.4	+16.1
Total—Least Instruction .....	1,295,721	47.7	45.2	-2.5	+39.3	40.0	37.5	-2.5	+19.8

14. D. COUNTIES OF MOST AGRICULTURAL SCARS AND									
South Midland Counties:—									
Wiltshire .....	258,733	45	41	—4	+20.5	30.4	23.9	—6.5	—23.4
Oxfordshire .....	161,643	37	34	—3	+5.0	40.0	32.4	—7.6	+3.4
Berkshire .....	161,147	40	42	+2	+28.6	39.2	27.2	—12.0	—13.0
Total—Most Instruction .....	581,523	41.2	39.2	—2.0	+21.0	35.4	27.2	—8.2	—13.0
Total—South Midland and Eastern Agricultural Counties .....	1,877,247	45.6	43.4	—2.2	+33.8	38.6	34.3	—4.3	+9.4
III. Metropolitan Counties: both in the highest scale of Instruction.									
Middlesex .....	1,576,636	13	13	...	—59.7	21.0	21.8	—2.2	—30.4
Surrey .....	582,678	16	15	—1	—53.2	32.5	27.2	—5.3	—12.9
Total—Most Instruction .....	2,159,314	13.6	13.6	...	—58.1	25.8	22.8	—3.0	—27.0
IV. North Midland and North Eastern Agricultural Counties.									
IV. A. Counties of Least Instruction, being the North Midland Counties:—									
Hercford .....	113,878	39	36	—3	+11.2	47.3	41.0	—6.3	+31.2
Shropshire .....	239,048	44	40	—4	+24.6	47.1	38.6	—8.5	+23.5
Total—Least Instruction .....	352,926	42.4	39.1	—3.3	+20.7	47.2	39.4	—7.8	+26.1
IV. n. Counties of Most Instruction, being the North Eastern Counties:—									
Lincolnshire .....	362,602	34	32	—2	—1.5	31.0	25.5	—5.5	—18.4
Northamptonshire .....	199,228	37	38	+1	+15.6	36.1	34.7	—1.4	+10.9
Rutlandshire .....	21,302	28	20	—8	—38.4	34.0	30.1	—3.9	—3.7
Total—Most Instruction .....	583,132	34.7	33.6	—1.1	+3.7	33.2	29.0	—4.2	—7.2
Total—North Midland and North Eastern Agricultural Counties .....	936,058	37.2	35.5	—1.7	+9.5	38.8	33.7	—5.1	+7.7

## APPENDIX I.—Continued.

DISTRICTS AND COUNTIES.	Population in 1841.	Proportion per Cent. of the Male Married who Signed the Marriage Register with Marks in the Year ending		Excess or Deficiency per Cent. of the Men Signing the Mar- riage Register with Marks in 1841, as compared with 1839-40.	Proportion per Cent. of Men Signing the Mar- riage Register with Marks in 1841, the Average of all England and Wales upon the like Num- ber of Marriages.	Proportion per Cent. of Male Criminals who could neither Read nor Write, 1837-8-9, 1842-3-4.		Excess or Deficiency per Cent. of Male Criminals who could neither Read nor Write in the former as compared with the latter period.	Proportion per Cent. of Male Criminals who could neither Read nor Write above or below the average of all England in 1842-3-4.	
		June 30, 1840.	Dec. 31, 1841.			1837-8-9.	1842-3-4.			
<b>V. South Midland Agricultural Counties, with Domestic Manufactures.</b>										
<b>V. a. Counties of Least Instruction:—</b>										
Bedfordshire .....	107,936	54	50	-4	+53.0	42.0	45.3	+3.3	+44.6	
Huntingdonshire .....	155,983	46	42	-4	+30.2	27.5	38.7	+1.2	+23.4	
Hertfordshire .....	157,207	52	50	-2	+53.8	58.6	39.3	-19.3	+25.7	
Total—Least Instruction .....	421,126	50.9	47.3	-3.6	+45.9	48.0	40.6	-7.4	+29.7	
<b>V. n. Counties of Most Instruction:—</b>										
Somersetshire .....	435,982	37	36	-1	+10.6	38.9	36.9	-2.0	+18.0	
Total—Most Instruction .....	435,982	37	36	-1	+10.6	38.9	36.9	-2.0	+18.0	
Total—South Midland Agricultural Counties, with Domestic Manufactures .....	857,108	43.5	41.3	-2.2	+27.3	43.1	38.6	-4.5	+23.3	
<b>VI. Western (and chiefly Celtic) Agricultural and Mining Counties.</b>										
<b>VI. a. Counties of Least Instruction:—</b>										
South Wales .....	515,283	47	45	-2	+39.3	32.2	36.4	+4.2	+16.4	
North Wales .....	396,320	47	41	-6	+26.1	43.7	40.9	-2.8	+30.8	
Monmouthshire .....	131,355	53	50	-3	+53.3	31.4	25.0	-5.4	-16.9	
Total—Least Instruction .....	1,045,958	48.1	44.4	-3.7	+36.8	35.3	34.9	-4	+11.5	
<b>VI. n. Counties of Most Instruction:—</b>										
Cornwall .....	341,279	35.7	36.3	+0.6	+11.8	28.8	27.0	-1.8	-13.4	
Total—Most Instruction .....	341,279	35.7	36.3	+0.6	+11.8	28.8	27.0	-1.8	-13.4	
Total—Western Agricultural and Mining Counties	1,387,237	45.2	42.4	-2.8	+39.9	33.3	33.1	-2	+6.0	

VII. <i>Northern Agricultural &amp; Mining Counties.</i>										
VII. A. Counties of Least Instruction:—										
Westmoreland.....	56,454	22.	21.	-1.	-36.2	17.0	9.9	-7.1	-68.4	
North Riding .....	204,122	23.	22.	-1.	-31.4	34.7	26.5	-8.2	-15.4	
Durham .....	324,284	27.	23.	-4.	-29.1	34.7	34.3	-4	+9.8	
Total—Least Instruction .....	584,860	25.2	22.5	-2.7	-30.4	33.1	29.5	-3.6	-6.0	
VII. B. Counties of Most Instruction:—										
Cumberland .....	178,038	16.	16.	....	-52.1	27.3	28.8	+1.5	-7.7	
East Riding (with City and Ainsty) .....	233,257	21.	20.	-1.	-37.1	34.8	26.3	-8.5	-15.9	
Northumberland .....	250,278	19.	16.	-3.	-51.3	28.7	26.0	-2.7	-17.0	
Total—Most Instruction .....	661,573	19.1	17.8	-1.3	-45.1	31.0	26.6	-4.4	-15.1	
Total—Northern Agricultural and Mining Counties .....	1,246,433	21.9	20.0	-1.9	-38.2	32.0	27.9	-4.1	-10.6	
VIII. <i>Northern and Midland Mining and Manufacturing Counties.</i>										
VIII. A. Counties of Least Instruction:—										
Cheshire .....	395,660	37.	33.	+1.	+0.4	35.0	30.8	-4.2	-1.5	
Lancashire .....	1,067,054	39.	40.	-3.	+22.1	39.5	38.3	-1.2	-22.6	
West Riding .....	1,151,101	41.	38.	....	+17.9	34.8	26.4	-8.4	-15.5	
Staffordshire .....	510,504	43.	43.	....	+31.3	25.6	30.8	+5.2	-1.6	
Worcestershire .....	233,336	45.	45.	....	+37.3	37.8	36.3	-1.5	+16.0	
Total—Least Instruction .....	3,960,655	40.3	39.4	0.9	+21.5	35.8	33.7	-2.1	+7.5	
VIII. B. Counties of Most Instruction:—										
Derbyshire .....	272,217	32.	28.	-4.	-13.6	30.3	25.9	-4.4	-17.2	
Gloucestershire .....	431,383	30.	28.	-2.	-13.2	36.0	28.6	-7.4	-8.4	
Warwickshire .....	401,715	31.	33.	-1.	+0.3	36.0	34.5	-1.5	+10.3	
Leicestershire .....	215,867	31.	32.	-2.	-2.8	27.7	28.0	+3	-10.5	
Nottinghamshire .....	249,910	33.	33.	....	+1.9	34.9	31.2	-3.7	-1	
Total—Most Instruction .....	1,571,092	32.4	30.6	-1.8	-5.6	34.1	30.3	-3.8	-3.1	
Total—North Midland Mining and Manufacturing Counties .....	5,531,747	38.2	37.3	-0.9	+14.9	35.3	32.6	-2.7	+4.4	
Grand Total—England and Wales .....	15,906,741	33.6	32.4	-1.2	....	34.4	31.3	-3.1	....	

APPENDIX II.—*Progress of Popular Education in Five Years from 1837-8-9 to 1842-3-4, as the following Degrees*

DISTRICTS AND COUNTIES.	Neither Read nor Write.			Read or Write imperfectly.		
	Proportion per Cent. of Criminals.		Excess or Deficiency per Cent.	Proportion per Cent. of Criminals.		Excess or Deficiency per Cent.
	1837 to 1839.	1842 to 1844.		1839 to 1842.	1842 to 1844.	
<i>I. Southern Agricultural and Maritime Counties.</i>						
<i>I. A. Counties of Least Instruction:—</i>						
Sussex .....	36·6	31·0	— 5·6	47·8	64·0	+ 16·2
Hants.....	34·1	26·4	— 7·7	56·9	65·7	+ 8·8
Dorset .....	31·5	37·3	+ 5·8	58·7	53·6	— 5·1
Total—Least Instruction .....	34·5	30·0	— 4·5	53·9	63·0	+ 9·1
<i>I. B. Counties of Most Instruction:—</i>						
Kent .....	38·3	33·1	— 5·2	55·3	62·1	+ 6·8
Devonshire .....	23·0	27·1	+ 4·1	63·6	59·5	— 4·1
Total—Most Instruction .....	32·8	30·7	— 2·1	58·3	61·1	+ 2·8
Total—Southern Agricultural and Maritime Counties .....	33·6	30·4	— 3·2	56·2	61·9	+ 5·7
<i>II. South Midland and Eastern Agricultural Counties.</i>						
<i>II. A. Counties of Least Instruction, being the Eastern Counties—</i>						
Suffolk .....	39·7	35·2	— 4·5	47·6	55·4	+ 7·8
Cambridge.....	32·7	29·4	— 3·3	53·0	63·4	+ 10·4
Norfolk .....	39·2	38·2	— 1·0	46·1	51·3	— 5·2
Essex .....	43·0	42·0	— 1·0	53·3	54·4	+ 1·1
Huntingdon .....	46·7	36·3	— 10·4	45·0	62·0	+ 7·0
Total—Least Instruction .....	40·0	37·5	— 2·5	49·4	54·9	+ 5·5
<i>II. B. Counties of Most Instruction, being the South Midland Counties—</i>						
Wiltshire .....	30·4	23·9	— 6·5	60·7	67·2	+ 6·5
Oxford .....	40·0	32·4	— 7·6	51·8	64·7	+ 12·9
Berkshire .....	39·2	27·2	— 12·0	53·0	68·8	+ 15·8
Total—Most Instruction .....	35·4	27·2	— 8·2	56·2	66·9	+ 10·7
Total—South Midland and Eastern Agricultural Counties .....	38·6	34·3	— 4·3	51·5	58·7	+ 7·2
<i>III. Metropolitan Counties; both in the highest scale of Instruction.</i>						
Middlesex .....	24·0	21·8	— 2·2	53·2	59·5	+ 6·3
Surrey .....	32·5	27·2	— 5·3	51·0	57·4	+ 6·4
Total—Most Instruction .....	25·8	22·8	— 3·0	52·8	59·1	+ 6·3

indicated by a Comparison of the Proportions of Persons committed for Trial, exhibiting each of Scholarship.

Read and Write well.		Superior Education.		Actual Number of Committals on the Average of the Three Years.		Proportion per Cent. above and below the Average of all England and Wales of those who could neither Read nor Write on the Average of the Three Years.		Per Centage of Increase or Decrease in the Number of Committals from 1837 to 1839 and 1842 to 1844.		Excess or Deficiency per Cent. in the Number of Persons who could neither Read nor Write in the two periods 1837 to 1839 and 1842 to 1844.	
Proportion per Cent. of Criminals.	Excess or Deficiency per Cent.	Proportion per Cent. of Criminals.	Excess or Deficiency per Cent.	1837 to 1839.	1842 to 1844.	1837 to 1839.	1842 to 1844.	1837 to 1839.	1842 to 1844.	1837 to 1839.	1842 to 1844.
15.0 8.8 9.8	5.0 7.2 8.5	-10.0 -1.6 -1.3	.6 .2 ....	425.67 514.33 232.67	406.33 517.00 193.00	+ 6.4 - .7 - 8.5	- .8 -15.7 + 19.3	- 4.5 + .5 -17.0	-12.4 - 9.3 -26.1		
11.3	6.6	- 4.7	.3	1172.67	1116.33	+ .3	- 4.3	- 4.8	-13.7		
5.8 13.2	4.6 12.9	- 1.2 - .3	.6 .2	806.33 460.00	852.33 549.67	+ 11.2 -32.9	+ 5.8 -13.4	+ 5.7 + 19.5	- 4.5 + 9.9		
8.5	7.8	- .7	.4	1266.33	1402.00	- 4.7	- 1.7	+ 10.7	+ .7		
9.8	7.3	- 2.5	.4	2439.00	2518.33	- 2.2	- 2.9	+ 3.2	- 6.2		
12.2 13.6 14.1 3.3 6.7	9.1 6.6 10.2 3.2 1.7	- 3.1 - 7.0 - 3.9 - .1 - 5.0	.5 .7 .6 .4 1.6	447.33 205.67 571.00 578.33 61.33	500.66 236.67 669.00 597.00 60.67	+ 15.4 - 4.8 + 14.0 + 24.9 + 35.7	+ 12.4 - 6.1 + 22.1 + 34.0 + 16.1	+ 11.9 + 12.1 + 17.2 + 3.2 - 1.0	+ 1.3 + 2.3 + 5.9 - 5.9 - 9.5		
10.0	7.2	- 2.8	.6	1863.66	2058.00	+ 16.3	+ 19.8	+ 10.4	+ 2.5		
8.9 8.2 7.8	7.7 2.9 3.9	- 1.2 - 5.3 - 3.9	.... .... ....	388.00 244.67 249.33	421.00 273.67 268.67	-11.6 + 16.2 + 14.0	-23.4 + 3.4 -13.0	+ 8.5 + 11.8 + 7.7	.... + 6.4 - 2.7		
8.4	5.3	- 3.1	....	882.00	963.34	+ 3.0	-13.0	+ 9.2	+ .9		
9.5	6.6	- 2.9	.4	2745.66	3021.34	+ 12.2	+ 9.4	+ 10.0	+ 4.5		
22.5 15.8	18.4 15.2	- 4.1 - .6	.3 .7	2636.67 753.33	3154.67 739.33	-30.5 - 5.4	-30.4 -12.9	+ 19.6 - 1.8	+ 6.9 -11.3		
21.0	17.8	- 3.2	.4	3390.00	3894.00	-24.8	-27.0	+ 14.9	+ 2.8		

## DISTRICTS AND COUNTIES.

	Neither Read nor Write.			Read or Write imperfectly.		
	Proportion per Cent. of Criminals.		Excess or Deficiency per Cent.	Proportion per Cent. of Criminals.		Excess or Deficiency per Cent.
	1837 to 1839.	1842 to 1844.		1837 to 1839.	1842 to 1844.	
IV. <i>North Midland and North Eastern Agricultural Counties.</i>						
IV. A. Counties of Least Instruction, being the North Midland Counties—						
Hereford .....	47·3	41·0	— 6·3	43·4	57·5	+ 14·1
Shropshire .....	47·1	38·6	— 8·5	46·2	58·7	+ 12·5
Total—Least Instruction .....	47·2	39·4	— 7·8	45·1	58·3	+ 13·2
IV. B. Counties of Most Instruction, being the North Eastern Counties—						
Lincolnshire .....	31·0	25·5	— 5·5	57·8	67·2	+ 9·4
Northamptonshire .....	36·1	34·7	— 1·4	58·3	58·4	+ ·1
Rutland .....	34·0	30·1	— 3·9	23·4	56·0	+ 32·6
Total—Most Instruction .....	33·2	29·0	— 4·2	57·1	63·5	+ 6·4
Total—North Midland and North Eastern Agricultural Counties .....	38·8	33·7	— 5·1	52·2	61·2	+ 9·0
V. <i>South Midland Agricultural Counties, with Domestic Manufactures.</i>						
V. A. Counties of Least Instruction:—						
Bedfordshire .....	42·0	45·3	+ 3·3	54·9	53·8	— 1·1
Buckinghamshire .....	37·5	38·7	+ 1·2	58·5	55·4	— 3·1
Hertfordshire .....	58·6	39·3	— 19·3	32·5	56·4	+ 23·9
Total—Least Instruction .....	48·0	40·6	— 7·4	45·9	55·4	+ 9·5
V. B. Counties of Most Instruction:—						
Somersetshire .....	38·9	36·9	— 2·0	48·8	54·2	+ 5·4
Total—Most Instruction .....	38·9	36·9	— 2·0	48·8	54·2	+ 5·4
Total—South Midland Agricultural Counties, with Domestic Manufactures .....	43·1	38·6	— 4·5	47·5	54·8	+ 7·3
VI. <i>Western (and chiefly Celtic) Agricultural and Mining Counties.</i>						
VI. A. Counties of Least Instruction:—						
South Wales .....	32·2	36·4	+ 4·2	54·1	56·6	+ 2·5
North Wales .....	43·7	40·9	— 2·8	52·2	55·5	+ 3·3
Monmouthshire .....	31·4	26·0	— 5·4	56·4	59·0	+ 2·6
Total—Least Instruction .....	35·3	34·9	— ·4	54·3	56·9	+ 2·6
VI. B. Counties of Most Instruction:—						
Cornwall .....	28·8	27·0	— 1·8	66·1	67·3	+ 1·2
Total—Most Instruction .....	28·8	27·0	— 1·8	66·1	67·3	+ 1·2
Total—Western Agricultural and Mining Counties .....	33·3	33·1	— ·2	58·0	59·3	+ 1·3

Continued.

Read and Write well.			Superior Education.			Actual Number of Committals on the Average of the Three Years.		Proportion per Cent. above and below the Average of all England and Wales of those who could neither Read nor Write on the Average of the Three Years.		Per Centage of Increase or Decrease in the Total Number of Committals from 1837 to 1839 and 1842 to 1844.	Excess or Deficiency per Cent. in the Calculated Average of those who could neither Read nor Write in the two periods 1837 to 1839 and 1842 to 1844.
Proportion per Cent. of Criminals.		Excess or Deficiency per Cent.	Proportion per Cent. of Criminals.		Excess or Deficiency per Cent.	1837 to 1839.	1842 to 1844.	1837 to 1839.	1842 to 1844.		
1837 to 1839.	1842 to 1844.		1837 to 1839.	1842 to 1844.							
8.7 6.4	1.5 2.4	— 7.2 — 4.0	.6 .3	.... .3	— .6 ....	158.67 230.33	198.33 401.67	+ 37.4 + 37.0	+ 31.2 + 23.5	+ 25.0 + 74.4	+ 14.1 + 62.6
7.3	2.1	— 5.2	.4	.2	— .2	389.00	600.00	+ 37.2	+ 26.1	+ 54.2	+ 42.4
11.0 5.4 42.6	6.7 6.8 13.9	— 4.3 + 1.4 — 28.7	.2 .2 ....	.6 .1 ....	+ .4 — .1 ....	320.00 233.67 15.67	444.67 271.00 32.00	— 9.9 + 5.1 — 1.1	— 18.4 + 10.9 — 3.7	+ 38.9 + 16.0 + 104.2	+ 25.4 + 3.1 + 79.9
9.5	7.1	— 2.4	.2	.4	+ .2	569.34	747.67	— 3.4	— 7.2	+ 31.3	+ 17.7
8.7	4.8	— 3.9	.3	.3	....	958.34	1347.67	+ 12.9	+ 7.7	+ 40.6	+ 27.7
3.1 3.7 8.5	.9 5.3 3.9	— 2.2 + 1.6 — 4.6	.... .3 .4	.... .6 .4	+ .... .3 ....	110.33 229.00 281.67	183.67 266.33 263.00	+ 22.2 + 9.1 + 70.6	+ 44.6 + 23.4 + 25.7	+ 66.4 + 16.3 — 6.6	+ 52.9 + 7.0 — 16.0
5.8	3.6	— 2.2	.2	.4	+ .2	621.00	713.00	+ 39.5	+ 29.7	+ 14.8	+ 4.7
12.3	8.8	— 3.5	....	.1	+ .1	756.67	897.33	+ 12.8	+ 18.0	+ 18.6	+ 8.8
12.3	8.8	— 3.5	....	.1	+ .1	756.67	897.33	+ 12.8	+ 18.0	+ 18.6	+ 8.8
9.3	6.4	— 2.9	.1	.2	+ .1	1377.67	1610.33	+ 25.2	+ 23.3	+ 16.9	+ 6.9
12.3 2.4 12.2	6.3 3.4 14.5	— 6.0 + 1.0 + 2.3	1.4 1.7 ....	.7 .2 .5	— .7 — 1.5 + .5	204.66 171.00 158.00	389.00 235.67 207.33	— 6.4 + 27.0 — 8.5	+ 16.4 + 30.8 — 16.9	+ 90.0 + 37.8 + 31.2	+ 57.2 + 34.9 + 19.2
9.4	7.7	— 1.7	1.0	.5	— .5	533.66	832.00	+ 2.8	+ 11.5	+ 55.9	+ 38.6
5.0	5.6	+ .6	.1	.1	....	227.00	218.00	— 16.2	— 13.4	— 3.9	— 12.3
5.0	5.6	+ .6	.1	.1	...	227.00	218.00	— 16.2	— 13.4	— 3.9	— 12.3
8.0	7.2	— .8	.7	.4	— .3	760.66	1050.00	— 3.1	+ 6.0	+ 38.0	+ 22.7

DISTRICTS AND COUNTIES.	Neither Read nor Write.		Read or Write imperfectly.			
	Proportion per Cent of Criminals.		Excess or Deficiency per Cent.	Proportion per Cent. of Criminals.		Excess or Deficiency per Cent.
	1837 to 1839.	1842 to 1844.		1837 to 1839.	1842 to 1844.	
<b>VII. Northern Agricultural and Mining Counties.</b>						
<b>VII. A. Counties of Least Instruction:—</b>						
Westmoreland .....	17·0	9·9	— 7·1	73·4	80·2	+ 6·8
North Riding .....	34·7	26·5	— 8·2	58·1	67·2	+ 9·1
Durham.....	34·7	34·3	— 4	60·7	61·0	+ 3
<b>Total—Least Instruction .....</b>	<b>33·1</b>	<b>29·5</b>	<b>— 3·6</b>	<b>60·6</b>	<b>64·9</b>	<b>+ 4·3</b>
<b>VII. B. Counties of Most Instruction:—</b>						
Cumberland .....	27·3	28·8	+ 1·5	50·7	56·4	+ 5·7
East Riding, with City and Ainsty .....	34·8	26·3	— 8·5	57·9	67·2	+ 9·3
Northumberland .....	28·7	26·0	— 2·7	57·2	70·0	+ 12·8
<b>Total—Most Instruction .....</b>	<b>31·0</b>	<b>26·6</b>	<b>— 4·4</b>	<b>55·8</b>	<b>66·6</b>	<b>+ 10·8</b>
<b>Total—Northern Agricultural and Mining Counties .....</b>	<b>32·0</b>	<b>27·9</b>	<b>— 4·1</b>	<b>57·9</b>	<b>65·8</b>	<b>+ 7·9</b>
<b>VIII. Northern and Midland Mining and Manufacturing Counties.</b>						
<b>VIII. A. Counties of Least Instruction:—</b>						
Cheshire .....	35·0	30·8	— 4·2	56·8	64·0	+ 7·2
Lancashire.....	39·5	38·3	— 1·2	52·6	55·1	+ 2·5
West Riding .....	34·8	26·4	— 8·4	57·8	67·3	+ 9·5
Staffordshire .....	25·6	30·8	+ 5·2	57·9	55·8	— 2·1
Worcestershire .....	37·8	36·3	— 1·5	57·7	59·6	+ 1·9
<b>Total—Least Instruction .....</b>	<b>35·8</b>	<b>33·7</b>	<b>— 2·1</b>	<b>55·2</b>	<b>59·1</b>	<b>+ 3·9</b>
<b>VIII. B. Counties of Most Instruction:—</b>						
Derbyshire .....	30·3	25·9	— 4·4	69·0	71·8	+ 2·8
Gloucestershire .....	36·0	28·6	— 7·4	56·0	66·3	+ 10·3
Warwickshire .....	36·0	34·5	— 1·5	55·6	53·2	— 2·4
Leicestershire .....	27·7	28·0	+ 3	53·0	59·6	+ 6·6
Nottingham .....	34·9	31·2	— 3·7	55·0	62·6	+ 7·6
<b>Total—Most Instruction .....</b>	<b>34·1</b>	<b>30·3</b>	<b>— 3·8</b>	<b>56·5</b>	<b>61·5</b>	<b>+ 5·0</b>
<b>Total North Midland Mining and Manufacturing Counties .....</b>	<b>35·3</b>	<b>32·6</b>	<b>— 2·7</b>	<b>55·7</b>	<b>59·9</b>	<b>+ 4·2</b>
<b>England and Wales .....</b>	<b>34·4</b>	<b>31·3</b>	<b>— 3·1</b>	<b>54·1</b>	<b>59·8</b>	<b>+ 5·7</b>

Continued.

Read and Write well.			Superior Education.			Actual Number of		Proportion		Per Centage of Increase or Decrease in the Total Number of Committals from 1837 to 1839 and 1842 to 1844.	Excess or Deficiency per Cent. in the Calculated Average of those who could neither Read nor Write in the two periods 1837 to 1839 and 1842 to 1844.
Proportion per Cent. of Criminals.		Excess or Deficiency per Cent.	Proportion per Cent. of Criminals.		Excess or Deficiency per Cent.	on the Average of the Three Years.		per Cent. above and below the Average of all England and Wales of those who could neither Read nor Write on the Average of the Three Years.			
1837 to 1839.	1842 to 1844.		1837 to 1839.	1842 to 1844.		1837 to 1839.	1842 to 1844.	1837 to 1839.	1842 to 1844.		
8.4	7.4	— 1.0	1.2	2.5	+ 1.3	27.67	27.23	—50.9	—68.4	— 1.2	—11.1
6.1	5.7	— .4	1.1	.6	— .5	153.00	236.00	+ .9	—15.4	+ 54.2	+ 43.2
4.6	4.6	....	....	.1	+ .1	145.33	254.00	+ .9	+ 9.8	+ 74.8	+ 63.9
5.6	5.2	— .4	.7	.4	— .3	326.00	517.33	— 3.6	— 6.0	+ 58.7	+ 47.6
22.0	14.8	— 7.2	....	....	....	111.67	81.67	—20.7	— 7.7	—26.8	—29.4
6.1	5.8	— .3	1.2	.7	— .5	175.00	269.33	+ 1.3	—15.9	+ 53.9	+ 42.9
13.5	3.5	—10.0	.6	.5	— .1	120.33	211.33	—16.4	—17.0	+ 75.6	+ 57.2
12.5	6.3	— 6.2	.7	.5	— .2	407.00	562.33	— 9.8	—15.1	+ 38.1	+ 27.8
9.5	5.8	— 3.7	.6	.5	— .1	733.00	1079.66	— 7.0	—10.6	+ 47.3	+ 36.7
6.8	4.1	— 2.7	1.4	1.1	— .3	532.67	797.67	+ 1.7	— 1.5	+ 49.8	+ 36.2
7.5	6.2	— 1.3	1.4	.4	— 1.0	2140.00	2861.33	+ 14.8	+ 22.6	+ 33.7	+ 20.4
6.2	5.7	— .5	1.2	.6	— .6	864.34	1333.00	+ 1.2	—15.5	+ 54.2	+ 43.2
16.1	12.5	— 3.6	.4	.9	+ .5	730.00	994.33	—25.5	— 1.6	+ 36.2	+ 23.7
3.9	3.5	— .4	.6	.6	....	369.33	532.67	+ 10.0	+ 16.0	+ 44.2	+ 31.3
8.3	6.5	— 1.8	.7	.7	....	4636.34	6519.00	+ 4.2	+ 7.5	+ 40.6	+ 27.8
.6	2.0	+ 1.4	.1	.3	+ .2	217.67	276.67	—11.7	—17.2	+ 27.1	+ 16.7
7.7	4.8	— 2.9	.3	.3	....	809.33	955.33	+ 4.8	— 8.4	+ 18.0	+ 7.1
8.0	11.1	+ 3.1	.4	1.2	+ .8	710.33	829.67	+ 4.5	+ 10.3	+ 16.8	+ 6.0
19.3	12.3	— 7.0	....	.1	+ .1	352.00	434.00	—19.5	—10.5	+ 23.3	+ 12.4
9.7	6.1	— 3.6	.4	.1	— .3	251.00	310.67	+ 1.5	— .1	+ 23.7	+ 13.0
9.1	7.7	— 1.4	.3	.5	+ .2	2340.33	2806.34	— .8	— 3.1	+ 19.9	+ 9.1
8.5	6.9	— 1.6	.5	.6	+ .1	6976.67	9325.34	+ 2.5	+ 4.4	33.6	+ 21.1
11.1	8.5	— 2.6	.4	.4							

APPENDIX III.—*Progress of Popular Education in Three Years from 1842-3-4 to 1845-6-7, each of the undermentioned*

DISTRICTS AND COUNTIES.	Neither Read nor Write.		Read or Write imperfectly.			
	Proportion per Cent. of Criminals.		Excess or Deficiency per Cent.	Proportion per Cent. of Criminals.		Excess or Deficiency per Cent.
	1842 to 1844.	1845 to 1847.		1842 to 1844.	1845 to 1847.	
I. <i>Southern Agricultural and Maritime Counties</i>						
I. A. Counties of Least Instruction:—						
Sussex .....	31·0	27·9	— 3·1	64·0	67·7	+ 3·7
Hants .....	26·4	30·5	+ 4·1	65·7	63·8	— 1·9
Dorset .....	37·3	33·5	— 3·8	53·6	55·2	+ 1·6
Total—Least Instruction .....	30·0	30·2	+ ·2	63·0	63·5	+ ·5
I. B. Counties of Most Instruction:—						
Kent .....	33·1	35·9	+ 2·8	62·1	57·4	— 4·7
Devonshire .....	27·1	33·0	+ 5·9	59·5	55·0	— 4·5
Total—Most Instruction .....	30·7	34·5	+ 3·8	61·1	56·3	— 4·8
Total—Southern Agricultural and Maritime Counties .....	30·4	32·5	+ 2·1	61·9	59·7	— 2·2
II. <i>South Midland and Eastern Agricultural Counties.</i>						
II. A. Counties of Least Instruction, being the Eastern Counties—						
Suffolk .....	35·2	32·9	— 2·3	55·4	59·5	+ 4·1
Cambridge .....	29·4	29·5	+ ·1	63·4	66·0	+ 2·6
Norfolk .....	38·2	40·5	+ 2·3	51·3	49·2	— 2·1
Essex .....	42·0	41·1	— ·9	54·4	53·9	— ·5
Huntingdon .....	36·3	26·7	— 10·4	62·0	70·5	+ 8·5
Total—Least Instruction .....	37·5	37·1	— ·4	54·9	55·7	+ ·8
II. B. Counties of Most Instruction, being the South Midland Counties—						
Wiltshire .....	23·9	23·5	— ·4	67·2	68·0	+ ·8
Oxford .....	32·4	30·4	— 2·0	64·7	64·7	....
Berkshire .....	27·2	33·0	+ 5·8	68·8	62·4	— 6·4
Total—Most Instruction .....	27·2	28·1	+ ·9	66·9	65·6	— 1·3
Total—South Midland and Eastern Agricultural Counties .....	34·3	34·2	— ·1	58·7	58·9	+ ·2
III. <i>Metropolitan Counties; both in the Highest Scale of Instruction.</i>						
Middlesex .....	21·8	23·6	+ 1·8	59·5	60·0	+ ·5
Surrey .....	27·2	24·1	— 3·1	57·4	62·4	+ 5·0
Total—Most Instruction .....	22·8	23·6	+ ·8	59·1	60·5	+ 1·4

as indicated by a Comparison of the Proportions of Persons committed for Trial who exhibited Degrees of Instruction.

Read and Write well.			Superior Education.			Actual Number of		Proportion		Per Centage of Increase or Decrease in the Total Number of Commitments from 1842 to 1844 and 1845 to 1847.	Excess or Deficiency per Cent. in the Calculated Average of those who could neither Read nor Write in the two periods 1842 to 1844 and 1845 to 1847.
Proportion per Cent. of Criminals.		Excess or Deficiency per Cent.	Proportion per Cent. of Criminals.		Excess or Deficiency per Cent.	Committals on the Average of the Three Years.		per Cent. above and below the Average of all England and Wales of those who could neither Read nor Write on the Average of the Three Years.			
1842 to 1844.	1845 to 1847.		1842 to 1844.	1845 to 1847.		1842 to 1844.	1845 to 1847.	1842 to 1844.	1845 to 1847.		
5.0	4.3	— .7	....	.1	+ .1	406.33	379.00	— .8	— 7.4	— 6.7	— 10.8
7.2	5.0	— 2.2	.7	.7	....	517.00	539.33	— 15.7	+ 1.2	+ 4.3	+ 1.0
8.5	10.3	+ 1.8	.6	1.0	+ .4	193.00	210.33	+ 19.3	+ 10.9	+ 9.0	+ 6.4
6.6	5.7	.9	.4	.6	+ .2	1116.33	1128.66	— 4.3	— .1	+ 1.1	— 2.4
4.6	6.1	+ 1.5	.2	.6	+ .4	852.33	684.00	+ 5.8	+ 19.0	— 19.7	— 22.3
12.9	11.5	— 1.4	.5	.5	....	549.67	605.33	— 13.4	+ 9.1	+ 10.1	+ 5.8
7.8	8.7	+ .9	.4	.5	+ .1	1402.00	1289.33	— 1.7	+ 14.4	— 8.0	— 11.2
7.3	7.3	....	.4	.5	+ .1	2518.33	2417.99	— 2.9	+ 7.7	— 3.9	— 7.3
9.1	7.0	— 2.1	.3	.6	+ .3	500.66	386.00	+ 12.4	+ 8.9	— 22.9	— 25.3
6.6	4.0	— 2.6	.6	.5	— .1	230.67	224.00	— 6.1	— 2.2	— 2.1	— 7.3
10.2	10.2	....	.3	.1	— .2	669.00	583.00	+ 22.1	+ 34.0	— 12.8	— 16.1
3.2	4.2	+ 1.0	.4	.8	+ .4	597.00	510.00	+ 34.0	+ 36.1	— 14.5	— 17.6
1.7	2.8	+ 1.1	....	....	....	60.67	71.00	+ 16.1	— 11.6	+ 17.0	— 13.2
7.2	6.7	— .5	.4	.5	+ .1	2058.00	1774.00	+ 19.8	+ 2.8	— 13.8	— 16.9
7.7	8.2	+ .5	1.2	.3	— .9	421.00	373.00	— 23.4	— 22.0	— 11.4	— 14.6
2.9	4.7	+ 1.8	....	.2	+ .2	273.67	236.00	+ 3.4	+ .6	— 13.7	— 15.5
3.9	4.3	+ .4	.1	.3	+ .2	268.67	237.00	— 13.0	+ 9.5	— 11.7	— 11.5
5.3	6.1	+ .8	.6	.2	— .4	963.34	846.00	— 13.0	— 6.8	— 12.2	— 14.0
6.6	6.5	— .1	.4	.4	....	3021.34	2620.00	+ 9.4	+ 13.2	— 13.2	— 16.0
18.4	16.3	— 2.1	.3	.1	— .2	3154.67	3620.00	— 30.4	— 22.0	+ 14.7	+ 12.9
15.2	13.2	— 2.0	.2	.3	+ .1	739.33	828.00	— 12.9	— 20.2	+ 12.0	+ 7.9
17.8	15.7	— 2.1	.3	.2	— .1	3894.00	4448.00	— 27.0	— 21.6	+ 14.2	+ 11.9

DISTRICTS AND COUNTIES.	Neither Read nor Write.			Read or Write imperfectly.		
	Proportion per Cent. of Criminals.		Excess or Deficiency per Cent.	Proportion per Cent. of Criminals.		Excess or Deficiency per Cent.
	1842 to 1844.	1845 to 1847.		1842 to 1844.	1845 to 1847.	
IV. <i>North Midland and North Eastern Agricultural Counties.</i>						
IV. A. Counties of Least Instruction, being the North Midland Counties—						
Hereford .....	41·0	46·7	+ 5·7	57·5	52·4	— 5·1
Shropshire.....	38·6	38·6	....	58·7	60·4	+ 1·7
Total—Least Instruction .....	39·4	42·1	+ 2·7	58·3	57·0	— 1·3
IV. B. Counties of Most Instruction, being the North Eastern Counties—						
Lincolnshire .....	25·5	29·4	+ 3·9	67·2	63·1	— 4·1
Northamptonshire.....	34·7	32·0	— 2·7	58·4	63·7	+ 5·3
Rutland.....	30·1	37·0	+ 6·9	56·0	63·0	+ 7·0
Total—Most Instruction .....	29·0	30·8	+ 1·8	63·5	63·3	— ·2
Total—North Midland and North Eastern Agricultural Counties .....	33·7	35·0	+ 1·3	61·2	61·0	— ·2
V. <i>South Midland Agricultural Counties, with Domestic Manufactures.</i>						
V. A. Counties of Least Instruction—						
Bedfordshire .....	45·3	38·9	— 3·6	53·8	60·9	+ 7·1
Buckinghamshire .....	38·7	34·6	— 4·1	55·4	60·1	+ 5·7
Hertfordshire .....	39·3	39·9	+ ·6	56·4	47·6	— 8·8
Total—Least Instruction .....	40·6	37·5	— 3·1	55·4	56·0	+ ·6
V. B. Counties of Most Instruction:—						
Somersetshire .....	36·9	35·4	— 1·5	54·2	51·6	— 2·6
Total—Most Instruction .....	36·9	35·4	— 1·5	54·2	51·6	— 2·6
Total—South Midland Agricultural Counties with Domestic Manufactures.....	38·6	36·5	— 2·1	54·8	53·9	— ·9
VI. <i>Western (and chiefly Celtic) Agricultural and Mining Counties.</i>						
VI. A. Counties of Least Instruction:—						
South Wales .....	36·4	32·4	— 4·0	56·6	58·4	+ 1·8
North Wales .....	40·9	36·6	— 4·3	55·5	57·5	+ 2·0
Monmouthshire .....	26·0	22·1	— 3·9	59·0	67·3	+ 8·3
Total—Least Instruction .....	34·9	30·8	— 4·1	56·9	60·5	+ 3·6
VI. B. Counties of Most Instruction:—						
Cornwall .....	27·0	33·3	+ 6·3	67·3	60·2	— 7·1
Total—Most Instruction .....	27·0	33·3	+ 6·3	67·3	60·2	— 7·1
Total—Western Agricultural and Mining Counties .....	33·1	31·5	— 1·6	59·3	60·4	+ 1·1

continued.

Read and Write well.		Superior Education.				Actual Number of Committals on the Average of the Three Years.		Proportion per Cent. above and below the Average of all England and Wales of those who could neither Read nor Write on the Average of the Three Years.		Per Centage of Increase or Decrease in the Total Number of Committals from 1842 to 1847 and 1848 to 1849.	Excess or Deficiency per Cent. in the Calculated Average of those who could neither Read nor Write on the Average of all England and Wales from 1842 to 1847.
Proportion per Cent. of Criminals.	Excess or Deficiency per Cent.	Proportion per Cent. of Criminals.	Excess or Deficiency per Cent.	1842 to 1844.	1845 to 1847.	1842 to 1844.	1845 to 1847.	1842 to 1844.	1845 to 1847.		
1842 to 1844.	1845 to 1847.	1842 to 1844.	1845 to 1847.	1842 to 1844.	1845 to 1847.	1842 to 1844.	1845 to 1847.	1842 to 1844.	1845 to 1847.		
1.5	.9	— .6	....	....	....	198.33	157.00	+ 31.2	+ 54.7	— 20.8	— 23.5
2.4	1.0	— 1.1	.3	....	— .3	401.67	206.33	+ 23.5	+ 27.8	— 48.6	— 49.8
2.1	.9	— 1.2	.2	....	— .2	600.00	363.33	+ 26.1	+ 39.5	— 39.4	— 41.0
6.7	7.0	+ .3	.6	.5	— .1	444.67	353.00	— 18.4	— 2.4	— 20.6	— 21.5
6.8	4.0	— 2.8	.1	.3	+ .2	271.00	231.67	+ 10.9	+ 6.0	— 14.5	— 16.2
13.9	....	— 13.9	....	....	....	32.00	27.00	— 3.7	+ 18.5	— 15.6	— 16.0
7.1	5.6	+ 1.5	.4	.3	— .1	747.67	611.67	— 7.2	+ 1.8	— 18.2	— 19.3
4.8	3.8	— 1.0	.3	.2	— .1	1347.67	975.00	+ 7.7	+ 15.9	— 27.6	— 29.1
.9	.2	— .7	....	....	....	183.67	154.00	+ 44.6	+ 29.0	— 16.1	— 19.0
5.3	4.8	— .5	.6	.5	— .1	266.33	272.00	+ 23.4	+ 14.7	+ 2.1	— 2.0
3.9	11.9	+ 8.0	.4	.6	+ .2	263.00	233.00	+ 25.7	+ 32.0	— 11.4	— 16.9
3.6	6.1	+ 2.5	.4	.4	....	713.00	659.00	+ 29.7	+ 24.1	— 7.5	— 12.0
8.8	13.0	+ 4.2	.1	....	— .1	897.33	638.00	+ 18.0	+ 17.2	— 28.9	— 30.5
8.8	13.0	+ 4.2	.1	....	— .1	897.33	638.00	+ 18.0	+ 17.2	— 28.9	— 30.5
6.4	9.4	+ 3.0	.2	.2	....	1610.33	1297.00	+ 23.3	+ 20.7	— 19.4	— 22.1
6.3	8.6	+ 2.3	.7	.6	— .1	389.00	315.00	+ 16.4	+ 7.2	— 19.0	— 10.5
3.4	5.4	+ 2.0	.2	.5	+ .3	235.67	210.66	+ 30.8	+ 21.0	— 10.6	— 11.4
11.5	10.4	— 4.1	.5	.2	— .3	207.33	180.33	— 16.9	— 26.7	— 13.0	— 14.0
7.7	8.2	+ .5	.5	.5	....	832.00	705.99	+ 11.5	+ 2.1	— 15.1	— 12.6
5.6	5.6	....	.1	.9	+ .8	218.00	228.67	— 13.4	+ 10.4	+ 4.9	+ 3.2
5.6	5.6	....	.1	.9	+ .8	218.00	228.67	— 13.4	+ 10.4	+ 4.9	+ 3.2
7.2	7.5	+ .3	.4	.6	+ .2	1050.00	934.66	+ 6.0	+ 4.2	— 10.9	— 9.1

## APPENDIX III

DISTRICTS AND COUNTIES.	Neither Read nor Write.			Read or Write imperfect		
	Proportion per Cent. of Criminals.		Excess or Deficiency per Cent.	Proportion per Cent. of Criminals.		Excess or Deficiency per Cent.
	1842 to 1844.	1845 to 1847.		1842 to 1844.	1845 to 1847.	
VII. <i>Northern Agricultural and Mining Counties.</i>						
VII. A. Counties of Least Instruction:—						
Westmoreland .....	9.9	22.9	+ 13.0	80.2	73.3	— 6.9
North Riding .....	26.5	26.1	— .4	67.2	67.7	+ .5
Durham .....	34.3	33.3	— 1.0	61.0	62.2	+ 1.2
Total—Least Instruction .....	29.5	29.2	— .3	64.9	65.7	+ .8
VII. B. Counties of Most Instruction:—						
Cumberland .....	28.8	22.6	— 6.2	56.4	65.4	+ 9.0
East Riding, with City and Ainsty .....	26.3	26.1	— .2	67.2	67.5	+ .3
Northumberland .....	26.0	22.1	— 3.9	70.0	72.9	+ 2.9
Total—Most Instruction .....	26.6	24.0	— 2.6	66.6	68.8	+ 2.2
Total—Northern Agricultural and Mining Counties .....	27.9	26.5	— 1.4	65.8	67.2	+ 1.4
VIII. <i>Northern and Midland Mining and Manufacturing Counties.</i>						
VIII. A. Counties of Least Instruction:—						
Cheshire .....	30.8	35.0	+ 4.2	64.0	57.5	— 6.5
Lancashire .....	38.3	32.6	— 5.7	55.1	61.1	+ 6.0
West Riding .....	26.4	26.1	— .3	67.3	67.5	+ .2
Staffordshire .....	30.8	30.4	— .4	55.8	57.0	+ 1.2
Worcestershire .....	36.3	36.5	+ .2	59.6	60.3	+ .7
Total—Least Instruction .....	33.7	31.7	— 2.0	59.1	61.3	+ 2.2
VIII. B. Counties of Most Instruction:—						
Derbyshire .....	25.9	24.5	— 1.4	71.8	73.5	+ 1.7
Gloucestershire .....	28.6	26.1	— 2.5	66.3	56.7	— 9.6
Warwickshire .....	34.5	30.4	— 4.1	53.2	59.4	+ 6.2
Leicestershire .....	28.0	23.5	— 5.5	59.6	59.0	— .6
Nottingham .....	31.2	31.4	+ .2	62.6	60.7	— 1.9
Total—Most Instruction .....	30.3	27.6	— 2.7	61.5	59.7	— 1.8
Total—North Midland Mining and Manufac- turing Counties .....	32.6	30.4	— 2.2	59.9	60.8	+ .9
England and Wales .....	31.3	30.2	— 1.1	59.8	60.2	+ .4

continued.

Read and Write well.			Superior Education.			Actual Number of Committals on the Average of the Three Years.		Proportion per Cent. above and below the Average of all England and Wales of those who could neither Read nor Write on the Average of the Three Years.		Per Centage of Increase or Decrease in the Total Number of Committals from 1842 to 1844 and 1845 to 1847.	Excess or Deficiency per Cent. in the Calculated Average of those who could neither Read nor Write in the two periods 1842 to 1844 and 1845 to 1847.
Proportion per Cent. of Criminals.	Excess or Deficiency	Per Cent.	Proportion per Cent. of Criminals.	Excess or Deficiency	Per Cent.	1842 to 1844.	1845 to 1847.	1842 to 1844.	1845 to 1847.		
1842 to 1844.	1845 to 1847.		1842 to 1844.	1845 to 1847.							
7.4	3.8	- 3.6	2.5	....	- 2.5	27.33	44.67	-68.4	-24.1	+ 63.4	+ 56.0
5.7	6.0	+ .3	.6	.2	- .4	236.00	164.67	-15.4	-13.4	-30.2	-32.9
4.6	4.5	- .1	.1	....	- .1	254.00	191.67	+ 9.8	+ 10.4	-24.5	-28.8
5.2	5.0	- .2	.4	.1	- .3	517.33	401.01	- 6.0	- 3.3	-22.4	-26.2
14.8	12.0	- 2.8	....	....	....	81.67	91.67	- 7.7	-25.3	+ 12.2	+ 7.4
5.8	6.0	+ .2	.7	.4	- .3	269.33	186.67	-15.9	-13.4	-30.7	-33.3
3.5	4.0	+ .5	.5	1.0	+ .5	211.33	136.00	-17.0	-26.7	-35.6	-34.7
6.3	6.7	+ .4	.5	.5	....	562.33	414.34	-15.1	-20.4	-26.3	-27.9
5.8	6.0	+ .2	.5	.3	- .2	1079.66	815.35	-10.6	-12.0	-24.5	-27.0
4.1	7.0	+ 2.9	1.1	.5	- .6	797.67	602.33	- 1.5	+ 15.8	-24.5	-27.8
6.2	5.8	- .4	.4	.5	+ .1	2861.33	2324.67	+ 22.6	+ 8.1	-18.7	-21.1
5.7	6.0	+ .3	.6	.4	- .2	1333.00	927.33	-15.5	-13.6	-30.4	-33.0
12.5	11.7	- .8	.9	.9	....	994.33	675.33	- 1.6	+ .7	-32.0	-34.9
3.5	2.6	- .9	.6	.6	....	532.67	454.17	+ 16.0	+ 20.9	-14.6	-17.3
6.5	6.4	- .1	.7	.6	- .1	6519.00	4984.33	+ 7.5	+ 5.2	-23.5	-26.2
2.0	2.0	....	.3	....	- .3	276.67	192.67	-17.2	-18.9	-30.3	-33.6
4.8	16.4	+ 11.6	.3	.8	+ .5	955.33	777.67	- 8.4	-13.5	-18.6	-20.9
11.1	9.1	- 2.4	1.2	1.1	- .1	829.67	693.33	+ 10.3	+ .8	-16.4	-19.3
12.3	17.5	+ 5.2	.1	....	- .1	434.00	293.67	-10.5	-22.1	-32.3	-34.4
6.1	7.6	+ 1.5	.1	.3	+ .2	310.67	248.33	- .1	+ 4.2	-20.0	-22.4
7.7	12.0	+ 4.3	.5	.7	+ .2	2806.34	2205.67	- 3.1	- 8.5	-21.4	-24.0
6.9	8.2	+ 1.3	.6	.6	....	9325.34	7190.00	+ 4.4	+ .9	-22.9	-25.5
8.5	9.2	+ .7	.4	.4							

SUMMARY TABLE, comparing the different Districts of England and Wales in respect to the Proportion of Persons committed for Trial in each, who show the several Degrees of Instruction described underneath, and to the changes in those Proportions effected in the course of Five Years, as tested by the Averages of 1837, 1838, and 1839, compared with those of 1842, 1843, and 1844.

DISTRICTS.	Neither Read nor Write.		Read or Write Imperfectly.		Read and Write Well.		Superior Education.		Average Number of Commitments in each Year.	Proportion per Cent. above and below the Average in all England and Wales of those who could neither Read nor Write.			Per Centage of Increase or Decrease in the number of Commitments from 1837 to 1839, and Half the Per Centage of Increase or Decrease of Population from 1831 to 1841.	Excess of Pauperism per Cent. in the Excluded Average of those who could neither Read nor Write in the two periods 1837 to 1839 and 1842 to 1844.	
	Proportion per Cent.	Excess or Deficiency	Proportion per Cent.	Excess or Deficiency	Proportion per Cent.	Excess or Deficiency	Proportion per Cent.			1837 to 1839.	1842 to 1844.				
							1837 to 1839.	1842 to 1844.							
LEAST INSTRUCTED DISTRICTS.															
II. The South, Midland and Eastern Agricultural Counties (exclusive of the Metropolitan) .....	38.634.3	- 4.3	51.558.7	+ 7.2	9.56.6	- 2.9	4	..	27.45.66	3021.34	+ 12.2	+ 9.4	+ 10.0	+ 3.98	+ 4.5
V. The South, Midland Agricultural and Manufacturing Counties ...	43.138.6	- 4.5	47.554.8	+ 7.3	9.36.4	- 2.9	1	2	1377.67	1610.33	+ 23.2	+ 23.3	+ 16.9	4.28	+ 6.9
VI. The Western (Celtic) Agricultural and Mining Counties .....	33.333.1	- 2	58.059.3	+ 1.3	8.07.2	- 8	7	4	760.66	1050.00	- 31	+ 6.0	+ 38.0	7.55	+ 22.7
VIII. The Northern and Midland Manufacturing and Mining Counties	35.332.6	- 2.7	55.759.9	+ 4.2	8.56.9	- 1.6	5	6	637.67	9325.34	+ 2.5	+ 4.1	+ 33.6	9.45	+ 21.1
Total of the Least Instructed Districts...	36.833.6	- 3.2	53.959.1	+ 5.2	8.86.8	- 2.0	5	5	1150.66	15007.01	+ 6.9	+ 7.5	+ 26.5	7.57	+ 15.0
MOST INSTRUCTED DISTRICTS.															
I. The Southern Agricultural and Maritime Counties .....	33.639.4	- 3.2	56.261.9	+ 5.7	9.87.3	- 2.5	4	4	2139.00	2518.33	- 2.3	- 2.9	+ 3.2	5.55	- 6.2
III. The two Metropolitan Counties ...	25.822.8	- 3.0	52.859.1	+ 6.3	21.017.8	- 3.2	4	3	3390.00	3804.00	- 2.18	- 27.0	+ 14.9	8.53	+ 2.8
IV. The North, Midland and North Eastern Agricultural Counties ...	38.833.7	- 5.1	52.261.2	+ 9.0	8.74.8	- 3.9	3	3	958.34	1347.67	+ 12.9	+ 7.7	+ 40.6	5.04	+ 27.7
VII. The Northern, Agricultural and Mining Counties .....	32.027.9	- 4.1	57.965.8	+ 7.9	9.55.8	- 3.7	6	5	733.00	1079.66	- 7.0	- 10.6	+ 47.3	6.83	+ 30.7
Total of the Most Instructed Districts...	30.627.3	- 3.3	51.361.1	+ 6.8	14.711.3	- 3.4	4	3	7520.34	8639.66	+ 11	- 12.8	+ 17.5	7.3	+ 6.2
Grand Total of England and Wales .....	31.431.3	- 3.1	51.159.8	+ 5.7	11.18.5	- 2.6	4	4	13881.00	23846.67	..	..	+ 23.0	7.23	+ 11.6

## MISCELLANEOUS

## STATE OF THE PUBLIC HEALTH IN THE SECOND QUARTER OF THE YEAR 1848.

"THE Quarterly Returns are obtained from 117 Districts, sub-divided into 582 Sub-Districts. *Thirty-six* Districts are in the Metropolis, and the remaining 81 comprise, with some agricultural Districts, the principal towns and cities of England. The population was 6,612,958 in 1841."

It is gratifying to observe a very remarkable improvement in the state of the public health. The number of deaths registered in the three months ending June 30th, was 46,552; which is less by 11,158 than were registered in the winter quarter of the present year, and less by 5,033 than were registered in the corresponding quarter ending the last day of June, 1847. The mortality of the country, after having been excessively high during the latter half of the year 1846, the whole of 1847, and the first quarter of 1848, is now little above the average of the nine years 1839—47. The mortality, however, is still much higher than it was in the spring quarter (April, May, and June,) of 1844, when the number of deaths was only 38,977; which, taking the increase of population into account, implies a lower rate of mortality than has been experienced in the spring season of any other year. The changes in the mortality of the parts of the country making the returns may be traced in the subjoined tables.

	1839	1840	1841	1842	1843	1844	1845	1846	1847	1848
Deaths Registered in the June quarters of 10 years.....	41,244	42,074	39,133	38,569	40,343	38,977	40,847	43,737	51,585	46,552
Deaths which would have been registered if the mortality had been uniform, and the numbers had increased from 1839 at the rate of 1.75 per cent. annually.	39,029	39,712	40,407	41,115	41,834	42,566	43,311	44,069	44,840	45,625
UNHEALTHY SEASONS Difference above the calculated number..	2,215	2,362	..	..	..	..	..	..	6,745	927
HEALTHY SEASONS. Difference below the calculated number..	..	..	1,274	2,546	1,491	3,589	2,464	332	..	..

*Deaths Registered in each of the Four Quarters of the Nine Years 1839—1847, and in the Two First Quarters of the Year 1848, in 117 of the Districts of England and Wales.*

Quarters ending	1839	1840	1841	1842	1843	1844	1845	1846	1847	1848
March ..	42,110	46,376	46,967	44,903	43,748	46,136	49,996	43,850	56,105	57,710
June ....	41,244	42,074	39,133	38,569	40,343	38,977	40,847	43,737	51,585	46,552
September	37,317	39,498	36,058	39,409	36,953	38,933	36,139	51,427	49,479	..
December	41,740	44,186	39,292	39,662	42,608	44,080	39,291	53,093	57,925	..
Total ..	162,711	172,134	161,450	162,543	163,652	168,126	166,273	192,107	215,094	..

In London the deaths in the quarter were 12,945; the deaths in the preceding quarter were 16,455; in the quarter ending December, 1847, when influenza prevailed, 19,605. Influenza has almost disappeared; it was the cause of death in only 50 cases during the 13 weeks ending in June. Small-pox was fatal to 381 persons in London; measles to 306; scarlatina to 816; whooping-cough to 449; purpura and scurvy to 12; typhus to 882; erysipelas to 129. Small-pox, scarlatina, and typhus were prevailing epidemics in London. Scarlatina in one week destroyed 107 lives. Typhus was at a maximum (1,279) in the last quarter of the year 1847; it is now declining; but it is invariably longer in the epidemic form than other diseases of the class. The diseases of the Tubercular class—namely, scrofula, tabes, consumption, and hydrocephalus, fluctuate very little; to them 2,640 deaths were ascribed in the June quarter of 1841, and 2,403 in the June quarter of 1848; which were the highest and lowest numbers returned in the 8 years 1841—8. Diseases of the lungs declined rapidly; they were the cause of 176 deaths in the first week, of 76 deaths in the last week of the quarter.

The improvement in the health of Liverpool is remarkable; while there were 4,809 deaths in the June quarter, 1847, there were only 1,907 deaths in the June quarter of 1848. In Manchester, Birmingham, and Leeds, there has also been some improvement.

Small-pox, and scarlatina, have been the prevailing epidemics throughout the country.

The Registrar of the eastern sub-district of Bolton, says:—

“The malignant fevers which have been so prevalent here have almost vanished, and the number of deaths continues to diminish. The town generally appears to be in a healthy state. A fall in the price of provisions has probably had a favourable effect.”

The Registrar of Wigan, after observing that there is a great decrease in the deaths, says:—

“This result may be attributed in a great measure to the decrease in the influx of Irish vagrants who brought disease with them into the town.”

The Registrar of St. George, Manchester, says:—

“Typhus, so prevalent during the last 15 months, has considerably abated. The poor people in the district are now more employed and better fed. This may account for the decline of fever, and consequent decrease of mortality.”

The Registrar of Market Street, Manchester, makes a similar statement:—

“In the Workhouse, New Bridge Street, 82 deaths were registered. In the corresponding quarter of last year, 199 deaths were recorded in that establishment. The almost universal want of employment amongst the labouring population and the high price of food occasioned severe privation, and no doubt greatly induced the spread of disease, and augmented the number of workhouse inmates at that period. At the fever hospital, Long Millgate, only 27 deaths have taken place, and the fever cases are so few, that the hospital is at this time entirely closed. During the quarter just ended, 52 persons died in the Royal Infirmary, on 24 of whom inquests were holden. Upon the whole, the district may be pronounced healthy in an unusual degree, the number of deaths being fewer than in any preceding quarter for a lengthened period.”

The deaths in London from diarrhoea, dysentery, and cholera, were 11, 23, 13, and 14, in the first four weeks: 27, 31, 37, and 51 in the last four weeks of the quarter. The mortality from these diseases is somewhat higher than it was in the corresponding weeks of 1847. The deaths ascribed to cholera in the June quarter of the eight years 1841—8, were, 1, 7, 8, 9, 2, 9, 4, 17; in the last year therefore, though the deaths are not numerous, there is a slight excess.

These three diseases are always most common in the three months, of July, August, and September, when the temperature is highest. The popular error which ascribes them to fruit was referred to last year. That it is an error is established by the fatality of these diseases to infants at the breast, to the aged, to persons in prison and public institutions who procure no fruit, and by many such facts as those reported about the middle of the last century, by Sir John Pringle, in his classical account of the diseases of the campaign in Germany. Fruit, potatoes, and green vegetables are essential parts of the food of man; and it is only when taken to excess, that like other articles of diet, they disorder the stomach.

There is as yet in England no trace of the epidemic of cholera which is ravaging

Russia, from Moscow to St. Petersburg, and ascending the Danube. It raged in the summer of 1831, seventeen years ago, at St. Petersburg, reached Sunderland in October, London in February, 1832, Paris in March of the same year. Whether it will pursue the same course now, travel at the same rate, and be less or more fatal, must depend on a variety of circumstances. If the visitation cannot be arrested, it is greatly to be wished that it should be deferred; for though enlightened communities have before been too much in the habit of postponing sanatory arrangements, and only commencing them when the plague is actually destroying them,—which is very like admitting the enemy within the city walls and then putting the fortifications in repair—it is certain that the great capitals of the Continent were never in a worse condition to withstand an epidemic, than they are at the present time.

That much remains to be done in English towns is evident from what is observed in London. It is one of the best established truths in medical science—confirmed by the experience of the army, the navy, the prisons, the town and country districts of England, that pure water and pure air are necessities of life; and in the supply of these, London, though in a much better position than other places, is still deficient. The vestry of St. Marylebone, the largest and wealthiest parish in London, to which we last year called attention, subsequently appointed a committee to inquire into the condition of their constituents. The committee drew up a valuable report in which they state among other things that:—"There are 583 streets or ways in the parish of St. Marylebone,"—and though formerly sceptical, and not very well informed, their information is now satisfactory and complete—"Your committee have through the parish surveyor obtained now for the first time a complete knowledge of the state of the sewers of this great parish, and they are compelled to declare that it is manifestly insufficient for the wants of the locality, no fewer than one hundred and ninety-one streets or ways in the parish being wholly without proper sewerage, and a great portion of the remainder defective or incomplete.\*" Your committee have to report another nuisance of a most pestilential character, over which they have not the slightest control, viz:—"the gully holes opening into the sewers. Of these, there are no less than 2,732 in the parish, and your committee feel that the number of these pest-holes has been increased, as the streets were built without the smallest reference to their previous situation and requirement, and without any regard to their noxious effect." There does not, in fact, appear to be any valid reason why these "gully holes" should open under the noses of the people; when the gases generated inevitably in the present sewers may be so easily carried up the sides of the chimneys, over the houses into the smoke. The committee accounts for this state of things in its own way:—"It must be attributed entirely to the fact, that the rate-payers have no voice at the Board of Commissioners of Sewers." The water supply is pronounced defective; the water is only "on" for about an hour three days a week. The Report says:—"The West Middlesex Company, who brought their water into the parish under the express pretence of defeating monopoly, of giving a cheaper and purer supply, after a few years entered into an agreement with the other companies, parcelled out the metropolis into districts, and placed the whole community at the mercy of this giant monopoly, both as regards supply and price\*." It is always so: the supply of water is a thing in which there can be no permanent competition.

The committee throws all the blame which the sewers and water-supply suggest, on other bodies; the vestry has the control of the "dust" and cleansing. This, though touched tenderly by the committee, is admitted to be in an unsatisfactory condition.

"Regarding the removal of the dust. Your committee find, in many places through the parish, accumulation of dust in the yards and cellars of the houses, and there is a very general complaint of the dustmen refusing to remove the same unless they are paid for so doing." For "dust" which is innoxious, read, the refuse of the kitchen, and all varieties of putrefying vegetable and animal matter: which were then only removed when paid for in some way or the other; and are even now never removed at all, but at the request of the inhabitants, who in the worst parts are not very intolerant of dirt.

These facts are not adduced to throw any special censure on the vestry of St.

\* A Report of Committee of the Vestry of St. Marylebone, on the Sanatory Condition of the Parish, pp. 7, 8, 9.

Marylebone; who, as well as their officers, have, since the report of their committee, evinced a laudable anxiety to do their duty to the constituency, and to improve the health of the district. The report of Marylebone exhibits a fair specimen of the condition of London; and must undeceive those who suppose that the houses are drained—or that the rich and middle classes, to say nothing of the poor of London, are adequately supplied with the means of cleanliness, and enjoy the benefit of a pure salubrious air. Other towns in England are comparatively in a worse condition; the continental cities are still more insalubrious; and judging from the analogy of the last epidemic they will suffer much more than London; but it is little satisfaction to the inhabitants of London to run the risk of dying by thousands, while their neighbours die by tens of thousands—when they know that the danger to their health and lives may be diminished to a great extent, by simple and obvious precautions. It may be a difficult, but it is assuredly not an impossible problem in engineering—to supply every house in London with abundance of pure water—and to remove all dirt by scavengers and sweet drains. And these simple arrangements would render it possible for the population to be cleanly\*.

A part of the mortality which men experience in early life is perhaps inevitable; but this natural mortality cannot exceed the mortality in some of the districts of England, comparatively healthy, where parts of the population are exposed to privation and injuries of various kinds. Now, in parts of Surrey and Devonshire, about 3 or 4 in 10 children under 5 years of age die annually; in Lewisham, the healthiest district of London, the annual mortality is 4 and 5 in 10 annually; in nearly every district of London the mortality of children is double the mortality in the country; in many districts the mortality is triple the mortality which some persons may consider natural to mankind. Of 1,000 men between the ages of 45 and 55, living in a healthy district of England, about 12 die annually; in nine districts of London the annual deaths among the same number of men at the same age varies from 30 to 33.

For nearly ten years facts of this kind have year after year been submitted to the public by this office. And that their practical effect might not be entirely lost—instead of giving the bare facts, or leaving the results enveloped in figures, their nature and bearing have been expressed in plain, and sometimes, perhaps, strong language; which those commissioners, vestries, and corporations, who happen to have been offended, will now think excusable. For if they have any regret, it will not be that their attention has been directed to sanitary improvements; but that whole communities, whose fate they have to a certain extent held in their hands—are now living in uncleansed houses—along streets one-third of which are not drained—crowded in fevered cities—while that dark destroying cloud that arose in Asia is looming over Europe.

It is not easy to determine from the vague terms employed in the letters and papers from St. Petersburg, whether cholera is now more or less fatal than it was in the former epidemic, which began on June 14, 1831, and ended in April, 1832; attacked 13,905 persons, and was fatal to 9,696, in that city. The deaths in Petersburg up to July 12th of the present year were 7,623. This would imply a much higher mortality than that experienced in the first epidemic. Little dependence however can be placed upon returns, or upon anything else, commenced in the midst of the conflagration an epidemic occasions. It is highly desirable that all the great cities in Europe should publish at all times such weekly statements of the mortality, and causes of death as now appear in London. They should be commenced before any epidemic breaks out. Such tables have been published, however imperfectly, in London ever since the reign of Queen Elizabeth; and were begun at the suggestion of the able statesmen by whom she was surrounded. When simultaneous observations are recorded on an extended scale, it will be possible, with the assistance of a body of trained Health-Officers, to determine the singular laws which regulate the diffusion of zymotic diseases.

\* For some sound practical suggestions in reference to cholera, see the Postscript to the Report on the Capabilities of the Metropolitan Workhouses for the Reception and Treatment of cholera cases.

## MORTALITY OF THE COUNTRY.

*Quarterly Table of the Mortality in 117 of the Districts of England (including the Principal Towns), showing the Number of Deaths Registered in the Quarters ending June of the Four Years 1845-46-47-48.*

Parts of Divisions and Districts.	Population 1841.	Deaths Registered in the Quarters ending June 30th.				Parts of Divisions and Districts.	Population 1841.	Deaths Registered in the Quarters ending June 30th.				
		Years.						Years.				
		1845.	1846.	1847.	1848.			1845.	1846.	1847.	1848.	
<i>Metropolis*.</i>						<i>North Midland Division.</i>						
West Districts..	301,326	1,843	1,694	1,724	1,334	Leicester .....	50,932	432	305	329	379	
North Districts..	376,610	2,177	2,231	2,424	2,431	Lincoln .....	36,110	202	205	211	222	
Central Districts	374,711	2,056	2,032	2,164	2,132	Notttingham.....	53,089	322	310	494	328	
East Districts ..	393,247	2,389	2,372	2,451	2,972	Basford .....	59,634	351	339	384	360	
South Districts..	592,475	2,559	3,094	3,398	3,466	Derby .....	53,015	206	209	223	270	
Total †.....	1,948,369	11,424	11,423	12,361	12,945	Total .....	234,771	1,513	1,368	1,551	1,559	
<i>South Eastern Division.</i>						<i>North Western Division.</i>						
Maidstone .....	32,310	173	165	212	185	Stockport .....	85,672	516	621	632	565	
Brighton .....	46,742	218	302	282	255	Mac Lesfield ..	56,018	362	438	509	476	
Isle of Wight ..	42,547	194	174	198	166	Great Brough-	49,085	291	312	322	312	
Poolesea Island ..	53,036	301	375	426	349	ton (including						
Winchester .....	23,944	139	125	130	132	Chester) .....	223,054	1,611	2,098	4,809	1,907	
Windsor .....	20,502	96	96	115	96	Liverpool .....	88,652	584	828	987	815	
Total .....	218,181	1,121	1,237	1,363	1,213	West Derby (adjoining	Liverpool) ..	75,091	525	638	642	664
<i>South Midland Division.</i>						Blackburn .....						
St. Albans .....	17,051	83	76	94	106	Preston .....	69,577	466	475	464	491	
Wycombe .....	34,150	192	129	185	150	Rochdale .....	77,496	436	531	626	529	
Oxford .....	19,701	86	111	80	98	Bury .....	97,519	643	689	812	755	
Northampton ..	28,103	251	156	176	211	Bolton .....	55,062	358	654	668	436	
Bedford .....	31,767	180	158	231	249	Wigan .....	45,739	234	284	474	241	
Cambridge .....	24,453	147	125	195	126	Prescott .....	39,736	647	705	757	837	
Total .....	155,225	939	755	961	940	Chorlton .....	Manchester .....	192,408	1,324	1,611	2,362	1,746
<i>Eastern Division.</i>						Salford .....	70,228	445	539	509	633	
Colchester .....	17,790	126	100	129	129	Ashton and Old-	173,964	1,382	1,400	1,492	1,476	
Ipswich .....	25,254	178	171	149	138	ham† .....	Total .....	1,530,460	10,305	12,470	16,692	12,416
Norwich .....	61,846	406	437	355	311	<i>York Division.</i>						
Yarmouth .....	24,031	191	133	100	125	Sheffield .....	85,076	513	832	636	808	
Total .....	128,921	901	841	733	703	Huddersfield ..	107,140	603	731	793	853	
<i>South Western Division.</i>						Hatfield .....	103,175	627	807	727	765	
Devizes .....	22,130	108	123	129	167	Bradford .....	132,164	1,106	1,208	1,109	1,056	
Dorchester .....	23,880	135	108	123	126	Leeds & Hunslet§	165,067	1,177	1,087	1,492	1,184	
Exeter .....	31,333	164	181	187	152	Hull .....	41,130	258	396	301	348	
St. Thomas .....	47,105	231	195	205	235	York .....	47,779	296	293	369	325	
Plymouth .....	36,527	225	184	191	259	Total .....	691,131	4,580	5,314	5,427	5,339	
Redruth .....	48,062	214	201	235	229	<i>Northern Division.</i>						
Penzance .....	50,100	204	208	240	231	Sunderland .....	56,296	303	452	369	404	
Bath .....	69,232	415	393	417	429	Gateshead .....	38,747	237	283	289	242	
Total .....	327,869	1,696	1,593	1,737	1,858	Tynemouth .....	55,625	293	423	398	322	
<i>Western Division.</i>						Newcastle-on- <sup>†</sup>	71,850	429	597	606	575	
Bristol .....	64,298	419	379	400	442	Tyne .....						
Clifton .....	66,233	375	338	369	432	Carlisle .....	36,084	203	241	433	235	
Stroud .....	38,920	203	182	192	222	Cockermouth ..	33,676	174	218	288	198	
Cheltenham .....	40,221	199	177	216	186	Kendal .....	34,694	184	212	256	202	
Hereford .....	34,427	168	187	208	209	Total .....	328,902	1,823	2,426	2,639	2,178	
Shrewsbury .....	31,529	118	132	158	156	<i>Welsh Division.</i>						
Worcester .....	27,139	159	139	196	174	Abercavenny ..	50,834	352	358	535	360	
Kidderminster ..	29,408	279	131	196	174	Pontypool .....	25,037	150	211	213	163	
Dudley .....	86,028	551	596	691	630	Merthyr Tydvil	52,564	461	438	585	433	
Walsall .....	34,274	180	220	252	289	Newtown .....	25,368	149	132	181	198	
Wolverhampton ..	80,722	541	500	847	625	Wrexham .....	39,542	214	244	63	339	
Wolverhampton ..	32,669	228	243	344	293	Holywell .....	40,787	280	220	267	236	
Birmingham .....	138,187	858	842	1,263	1,135	Anglesey .....	38,165	191	205	293	201	
Aston .....	50,928	292	269	320	299	Total .....	273,127	1,797	1,808	2,277	1,930	
Coventry .....	31,028	187	164	192	205	Ditto, exclu- <sup>†</sup>	4,666,589	29,423	32,311	39,224	33,607	
Total .....	776,002	4,748	4,499	5,844	5,471	sive of the						
						Metropolis†						
						Grand Total ..	6,612,958	49,547	43,734	51,585	46,552	

\* The mortality of the districts of Wandsworth and Lewisham, and sub-district of Hampstead, is included in the above table, in each of the four years, though the deaths in Wandsworth did not appear in the Weekly Metropolitan Returns till 1844; nor those of Lewisham and Hampstead till 1847.

† The last quarter for the London returns ended July 1, 1848.

‡ The former district of Ashton is now divided into Ashton and Oldham, both included in the present return.

§ The former district of Leeds is now divided into Leeds and Hunslet, both included in the present return.

|| The return for the sub-district of Whitford (Holywell) has not been received this quarter; the average of the four preceding June quarters has been substituted.

## MORTALITY OF THE METROPOLIS.

*A Table of the Mortality in the Metropolis, showing the Number of Deaths from all Causes, in the Quarters ending June of the Four Years, 1845-46-47-48.*

CAUSES OF DEATH.	Quarters ending June*				CAUSES OF DEATH.	Quarters ending June*			
	1845.	1846.	1847.	1848.		1844.	1845.	1846.	1847.
ALL CAUSES.....	11,267	11,271	12,361	12,945	III. Scrofula.....	41	77	73	100
SPECIFIED CAUSES.....	11,231	11,235	12,331	12,877	Tabes Mesenterica..	128	202	227	199
I. Zymotic Diseases....	1,894	1,820	2,148	3,611	Phthisis or Con- sumption.....	1,819	1,850	1,733	1,699
SPORADIC DISEASES.					Hydrocephalus....	456	443	407	405
II. Dropsy, Cancer, and other Diseases of uncertain or va- riable Seat.....	674	492	548	560	Cephalitis.....	144	147	173	140
III. Tubercular Diseases..	2,444	2,572	2,440	2,403	Apoplexy.....	252	329	317	256
IV. Diseases of the Brain, Spinal Marrow, Nerves, and Senses	1,482	1,544	1,590	1,446	Paralysis.....	191	246	255	269
V. Diseases of the Heart and Blood Vessels	419	405	515	365	Delirium Tremens..	23	33	35	35
VI. Diseases of the Lungs and of the other Organs of Respiration.....	1,591	1,574	1,923	1,672	Chorea.....	3	1	1	..
VII. Diseases of the Stom- ach, Liver, and other Organs of Digestion.....	731	788	830	728	Epilepsy.....	49	90	101	64
VIII. Diseases of the Kid- neys, &c.....	125	133	151	149	Tetanus.....	7	5	3	5
IX. Childbirth, Diseases of the Uterus, &c.)	150	158	177	112	Insanity.....	16	29	31	23
X. Rheumatism, Dis- eases of the Bones, Joints, &c.....	85	134	161	92	Convulsions.....	641	514	526	499
XI. Diseases of the Skin, Cellular Tissue, &c.)	16	15	22	21	Disease of Brain, &c.	156	150	148	155
XII. Malformations.....	17	47	40	58	Pericarditis.....	29	20	34	21
XIII. Premature Birth & Debility.....	242	255	286	292	Aneurism.....	11	11	15	20
XIV. Atrophy.....	136	235	291	312	Disease of Heart....	379	374	466	324
XV. Age.....	744	491	664	498	Laryngitis.....	12	28	47	61
XVI. Sudden†.....	152	129	159	133	Bronchitis.....	272	519	710	565
XVII. Violence, Privation, Cold, and Intem- perance.....	329	443	395	425	Pleurisy.....	28	40	67	56
					Pneumonia.....	869	705	748	732
					Asthma.....	203	150	201	136
					Disease of Lungs, &c	207	141	150	122
					Teething.....	163	114	120	129
					Quinsey.....	14	16	20	18
					Gastritis.....	19	20	39	14
					Enteritis.....	143	106	106	82
					Peritonitis.....	37	54	66	65
					Ascites.....	14	24	23	24
					Ulceration (of In- testines, &c.).....	32	40	23	34
					Hernia.....	25	28	45	40
					Ileus.....	31	39	37	24
					Intussusception.....	11	18	22	12
					Stricture of the In- testine Canal.....	6	11	7	2
					Dis. of Stomach, &c.	65	82	55	85
					Disease of Pancreas	1	1	..	3
					Hepatitis.....	24	48	55	39
					Jaundice.....	27	30	36	31
					Disease of Liver.....	117	154	155	133
					Disease of Spleen ..	2	3	..	2
					Nephritis.....	4	11	7	5
					Nephria (or Bright's Disease) }	..	..	..	32
					Ischuria.....	..	2	2	3
					Diabetes.....	7	9	7	10
					Stone.....	10	7	13	9
					Cystitis.....	5	11	7	10
					Stricture of Urethra	12	8	11	21
					Dis. of Kidneys, &c.	87	85	104	59
					Paramecia.....	1	4	4	3
					Ovarian Dropsy....	8	15	20	8
					Childbirth, see Metria	104	102	102	63
					Dis. of Uterus, &c...	37	37	51	38
					Arthritis.....	2	2	4	..
					Rheumatism.....	31	79	84	55
					Disease of Joints, &c.	52	53	73	37
					Carbuncle.....	3	..	3	6
					Phlegmon.....	2	6	7	5
					Disease of Skin, &c.	11	9	12	10
					Intemperance.....	15	20	13	12
					Privation.....	3	6	12	5
					Want of Breast Milk, see Privation & Atrophy }	..	..	..	32
					Neglect.....	..	..	..	2
					Cold, see Privation..	..	..	..	..
					Poison.....	..	..	..	35
					Burns and Scalds..	..	..	..	41
					Hanging, &c.....	..	..	..	42
					Drowning.....	..	..	..	78
					Fractures and Con- tusions.....	311	417	370	138
					Wounds.....	..	..	..	30
					Other Violence....	..	..	..	10
					Causes not specified	36	36	30	68

\* The mortality of the district of Lewisham, and sub-district of H. unpstead, was included in the Metropolitan returns at the commencement of 1847, for the first time. If however the deaths for previous years are not contained in the above table, in the quarters ending June they were respectively (1840) 171, (1841) 172, (1842) 128, (1843) 127, (1844) 126, (1845) 157, (1846) 152.

† Under the head of "sudden deaths" are classed not only deaths described as sudden, of which the cause has not been ascertained or stated; but also all deaths returned by the Coroner in vague terms, such as "found dead," "natural causes," &c., &c.

‡ In the years previous to 1848, "Worms" and "Infantile Fever" were classed together. The former is now placed to diseases of digestive organs.



REMARKS ON THE WEATHER DURING THE QUARTER ENDING  
JUNE 30th, 1848.By JAMES GLAISHER, Esq., *of the Royal Observatory, Greenwich.*

THE weather during the first month of this Quarter was a continuance of the wet weather of the two preceding months; that during May was extremely fine; and that in the month of June was changeable, wet, and dull. Till April 5 the daily temperatures of the air exceeded the averages of the same days of seven previous years by  $11^{\circ}9$ ,  $12^{\circ}8$ ,  $15^{\circ}6$ ,  $16^{\circ}1$ , and  $7^{\circ}2$ ; on the 6th it was below the average and for the most part continued below till May 2, at times to a great extent; from this time till the 30th of May, the daily temperatures exceeded their averages by quantities varying from  $2^{\circ}$  to  $15^{\circ}$ . From May 30 to the end of the quarter, the daily temperatures were below their average values, with the exception of eight days only.

The mean amount of cloud for April was 7.3, for May was 3.0, and for June was 7.4. The month of May presented this remarkable peculiarity—that the sky was absolutely cloudless, both day and night during the first eight days, and almost free from cloud till the 15th day, the atmosphere being free from haze during this time. These circumstances are without a parallel on record. The sky during the months of April and June was more clouded than usual, so that the mean amount for the quarter, viz., 5.9, is only 0.2 less than the average for the corresponding quarter of the seven previous years.

There were three exhibitions of the Aurora Borealis during the quarter, which occurred on April 3, 7, and 29.

The heavy rains in April, following the wet weather of February and March, caused the land to be in a soddened state, and rivers generally to be much swollen. The thunder-storms in many places did much damage. The months of February, March, and April were so wet that the spring corn was sown with much difficulty. The month of May was distinguished by high temperatures, cloudless skies both day and night for a long period, very small falls of rain, with only the average amount of water mixed with the air notwithstanding the high temperatures, so that the degree of humidity was small. The earth became sun-baked and so hard as to be almost unbreakable; vegetation was greatly checked. During the month of June the earth again became saturated; the crops improved, and at the end of the quarter there was every prospect of a full average produce.



From the numbers in the first column it seems that the volume of dry air was the same at all parts of the country. The mean of all these results is 29·554 inches, and this value may be considered as the pressure of dry air for England during the quarter ending June 30, 1848.

From the numbers in the second column, it seems that the mean temperature of the air for the quarter ending June 30, 1848, in the counties of Cornwall and Devonshire was 54°1; at places situated south of latitude 52° was 54°0; between the latitude of 52° and 53° was 53°6; between the latitudes of 53° and 54° was 52°0; and of Durham and Newcastle was 50°7.

The average daily range of the temperature of the air in Cornwall and Devonshire was 15°3; at Brighton, Liverpool, and Whitehaven was 14°9; south of the latitude of 52° was 21°3; between the latitudes of 52° and 53° was 20°3; between the latitudes of 53° and 54° was 19°5; and of Durham and Newcastle, was 14°9.

The greatest mean daily ranges took place at Latimer, Hartwell, Aylesbury, and Beckington respectively; and the least occurred at Liverpool, Brighton, Whitehaven, and Newcastle respectively.

The highest thermometer reading during the quarter was at Leeds, which was 88°, and the lowest was also at Leeds, viz. 23°. The extreme range of temperature in England, during the quarter, was therefore 65°; but this is probably somewhat too great.

The average quarterly range of the reading of the thermometer in Cornwall and Devonshire was 42°5; at Brighton, Liverpool, and Whitehaven, was 37°7; at all other places except Beckington, Hartwell, Leeds, and Wakefield, was 51°5.

The direction of the wind has been so variable, that it is not possible to determine its mean direction. Observers in adjacent localities have estimated it differently; at all places its strength seems to have been unusually small.

From the numbers in the ninth column the distribution of cloud seems to have been the same at all places, and such as to cover about one-half of the sky. This value is much less than the average amount of cloud.

The fall of rain during the quarter has greatly exceeded the average amount for the season; the amount in May was much below the average for that month: in the months of April and June the amount was unusually large, particularly in the latter month. The places at which rain fell on the greatest number of days were Leeds, Nottingham, Stonyhurst, Saffron Walden, &c., &c.; and on the smallest number of days were Thwaite, Scarva, Helston, Newcastle, &c. The places at which the largest falls have taken place were, Hereford, Stonyhurst, Southampton, York, Leeds, Wakefield, &c.; and the places where the falls have been the least in amount, are Saffron Walden, Cambridge, Newcastle, Stone, &c.; but it would seem that the amount at the last mentioned place is wrong (see the amounts at Hartwell and Aylesbury). Generally the largest falls have been in Yorkshire, and the smallest in the counties N. of Yorkshire.

The numbers in columns 12 to 16 show the mean values of the hygrometrical results at every station; from which we find, that

The mean weight of vapour in a cubic foot of air for England (excepting Cornwall and Devonshire) in the quarter ending June 30, 1848, was 3·8 grains.

The mean additional weight required to saturate a cubic foot of air in the quarter ending June 30, 1848, was 1·1 grains.

The mean degree of humidity (complete saturation = 1), in the quarter ending June 30, 1848, was 0·778.

The mean amount of vapour mixed with the air would have produced water, if all had been precipitated at one time on the surface of the earth, to the depth of 4·6 inches in the quarter ending June 30, 1848.

The mean weight of a cubic foot of air at the level of the sea, under the mean temperature, humidity, and pressure, in the quarter ending June 30, 1848, was 534 grains.

And these values for Cornwall and Devonshire were 3·8 grains; 1·2 grains; 0·765; 4·7 inches; and 534 grains respectively.

The results from the station in Ireland agree very closely with those in England, in the same parallel of latitude, excepting those depending on the water mixed with the air; and in these respects an excess of humidity is shown at this station.

## REVENUE.

*Abstract of the Net Produce of the Revenue of Great Britain in the Years and Quarters ending 10th October, 1847 and 1848; showing the Increase or Decrease thereof.—(Continued from page 301.)*

Sources of Revenue.	Years ending 10th October.			
	1847.	1848.	Increase.	Decrease.
	£	£	£	£
Customs.....	18,418,157	18,358,827	....	59,330
Excise .....	12,092,018	12,825,861	733,843	....
Stamps .....	7,135,378	6,203,105	....	932,273
Taxes .....	4,329,677	4,308,474	....	21,203
Property Tax .....	5,438,453	5,385,498	....	52,955
Post Office .....	859,000	786,000	....	73,000
Crown Lands.....	67,000	91,000	24,000	....
Miscellaneous .....	202,837	170,998	....	31,839
Total Ordinary Revenue ....	48,542,520	48,129,763	757,843	1,170,600
China Money .....	....	455,021	455,021	....
Imprest and other Moneys .	217,912	312,308	94,396	....
Repayments of Advances....	792,447	347,604	....	444,843
Total Income.....	49,552,879	49,244,696	1,307,260	1,615,443
	Deduct Increase .....			1,307,260
	Decrease on the Year .....			308,183

Sources of Revenue.	Quarters ending 10th October.			
	1847.	1848.	Increase.	Decrease.
	£	£	£	£
Customs .....	4,936,644	5,406,483	469,839	....
Excise .....	3,539,946	4,102,574	562,628	....
Stamps .....	1,707,945	1,461,942	....	246,003
Taxes .....	213,885	215,656	1,771	....
Property Tax .....	1,918,645	1,892,890	....	25,755
Post Office.....	222,000	221,000	....	1,000
Crown Lands.....	....	20,000	20,000	....
Miscellaneous .....	73,126	13,923	....	59,203
Total Ordinary Revenue ....	12,612,191	13,334,468	1,054,238	331,961
China Money .....	....	....	....	....
Imprest and other Moneys	43,537	168,437	124,900	....
Repayments of Advances ....	187,486	112,605	....	74,881
Total Income .....	12,843,214	13,615,510	1,179,138	406,842
	Deduct Decrease .....			406,842
	Increase on the Quarter .....			772,296

*Consolidated Fund Operations.*—The total income brought to this account in the quarter ending 10th October, 1848, was 13,627,719*l.* The total charge upon it was 7,762,108*l.*, leaving a surplus of 5,865,611*l.* The amount of Exchequer Bills issued to meet the charge on the Consolidated Fund for the quarter ending 5th July, 1848, and paid off out of the growing produce of that fund for the quarter ending 10th October, 1848, was 1,471,282*l.*

The probable amount of Exchequer Bills required to meet the charge on the Consolidated Fund in the quarter ending 10th October, 1848, is stated at 1,562,009*l.*

## CORN.

*Average Prices of Corn per Imperial Quarter in England and Wales, during each Week of the Third Quarter of 1848; together with the Average Prices for the whole Quarter.—(Continued from p. 302.)*

Returns received at the Corn Office, 1848.		Wheat.		Barley.	Oats.	Rye.	Beans.	Peas.
		Weekly Average	Aggregate Average of Six Weeks regulating Duty.	Weekly Average	Weekly Average	Weekly Average	Weekly Average	Weekly Average
Weeks ending 1848.		<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
July	1	48 2	47 7	30 5	20 10	30 2	36 8	38 2
	8	48 10	47 9	30 1	20 8	31 0	36 8	37 4
	15	49 1	47 11	29 0	20 9	31 0	36 6	37 3
	22	48 11	48 2	30 2	20 3	28 3	35 11	36 3
	29	47 11	48 4	29 5	20 7	30 2	35 9	36 1
August	5	49 5	48 9	29 11	21 0	29 4	35 3	31 8
	12	50 11	49 2	30 1	21 8	29 7	36 0	35 2
	19	51 0	49 6	30 3	21 5	31 11	37 9	36 3
	26	52 3	50 1	31 2	21 11	30 11	38 1	37 7
September	2	55 5	51 2	32 1	22 6	32 2	38 8	38 11
	9	56 10	52 8	33 4	22 10	33 8	39 1	41 6
	16	53 8	53 4	33 3	22 2	33 5	38 10	40 2
	23	52 4	53 7	33 7	21 11	32 0	37 11	37 11
	30	52 9	53 10	33 3	21 1	31 9	36 1	39 8
Average of the Quarter		51 3	50 1 $\frac{1}{4}$	31 1 $\frac{3}{4}$	21 4 $\frac{3}{4}$	31 1	37 1	37 7 $\frac{1}{2}$

*Foreign and Colonial Wheat and Wheat-Flour imported in each of the Months ending 5th July, 5th August, and 5th September, 1847; the Quantities Entered for Home Consumption during the same Months; and the Quantities remaining in Warehouse at the close of them.—(Continued from p. 302.)*

## WHEAT.

Months ending.	Imported.			Quantities entered for Home Consumption.			In Bond at the Month's end.		
	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.
1848	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.
5th July	130,710	1,635	132,375	110,243	1,871	112,114	68,921	..	68,921
5th Aug.	88,200	1,618	89,818	32,911	1,598	34,509	115,937	21	115,958
5th Sept.	180,990	87	181,077	51,338	107	51,445	225,614	..	225,614

## WHEAT-FLOUR.

Months ending.	Imported.			Quantities entered for Home Consumption.			In Bond at the Month's end.		
	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.
1848	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.
5th July	2,511	45,949	48,160	3,576	45,953	49,529	3,321	..	3,321
5th Aug.	12,352	71,376	83,728	3,160	70,948	74,108	13,791	429	14,223
5th Sept.	14,472	73,625	88,097	5,274	71,818	77,092	23,010	2,236	25,246

## CURRENCY.

## BANK OF ENGLAND.

*An Account, pursuant to the Act of the 7th and 8th Victoria, c. 32, for the Weeks ending on Saturday, the 22nd July, the 19th August, and the 16th September, 1848.—(Continued from p. 303.)*

## ISSUE DEPARTMENT.

	Weeks ending		
	22nd July, 1848.	19th Aug., 1848.	16th Sept., 1848.
	£	£	£
Notes issued .....	27,451,560	26,763,645	27,198,740
Government Debt .....	11,015,100	11,015,100	11,015,100
Other Securities .....	2,984,900	2,984,900	2,984,900
Gold Coin and Bullion .....	12,123,761	11,873,485	12,663,837
Silver Bullion .....	1,327,799	890,160	534,903
Total .....	27,451,560	26,763,645	27,198,740

## BANKING DEPARTMENT.

Proprietors' Capital .....	14,553,000	14,553,000	14,553,000
Rest .....	3,198,611	3,608,790	3,831,710
Public Deposits .....	2,410,857	4,545,098	6,136,421
Other Deposits .....	11,376,888	8,575,809	8,730,767
Seven Day and other Bills ....	1,127,125	1,101,209	991,401
Total .....	32,966,481	32,383,906	34,303,299
Government Securities, including ) Dead Weight Annuities .....	12,807,546	12,462,735	12,675,613
Other Securities .....	11,090,948	10,862,959	11,192,375
Notes .....	8,410,840	8,450,310	9,511,370
Gold and Silver Coin .....	657,147	607,902	623,941
Total .....	32,966,481	32,383,906	34,303,299

## COUNTRY BANKS.

*Average Aggregate Amount of Promissory Notes of Country Banks, which have been in Circulation in the United Kingdom, distinguishing the several Banks, or Classes of Banks by which issued in each part of the Kingdom, during the weeks ending 20th May, 17th June, and 15th July, 1848.—(Continued from p. 303.)*

Banks.	20th May, 1848.	17th June, 1848.	15th July, 1848.
England—Private Banks .....	3,846,615	3,628,346	3,569,534
Joint Stock Banks .....	2,782,855	2,573,630	2,525,005
Scotland—Chartered, Private, and Joint Stock Banks .....	3,152,319	3,437,587	3,106,654
Ireland—Bank of Ireland .....	2,971,825	2,863,800	2,766,125
Private and Joint Stock Banks .....	1,868,837	1,797,546	1,712,799
Total .....	14,622,481	14,300,909	13,680,117

## BANKRUPTCY.

*An Analysis of the Bankruptcies in England and Wales, gazetted in each Month of the Quarter ending 30th September, 1848; showing the Counties and Branches of Industry in which they have occurred.—(Continued from p. 304.)*

COUNTIES.	July.	August.	September.	TRADES.	July.	August.	September.
Metropolis.....	17	14	19	<i>Agriculture and connected Trades.</i>			
Bedford .....		2	4	Farmers .....	4	8	4
Berks .....	1	3		Agricultural Implement Makers, &c. ....	2	3	2
Bucks.....		2	3	Corn Factors .....	1		
Cambridge .....		2		Millers and Malsters .....		2	
Cheshire .....	2		1	Hop Merchants .....	4	4	
Cornwall .....		3		Brewers .....	4	5	3
Cumberland .....		3	3	Horse and Cattle Dealers, and Woolstaplers ....	5		
Derby .....	1			<i>Mining and connected Trades.</i>			
Devon .....	2	2		Mining Firms .....	1		
Dorset .....	2	5	2	Blasting Works .....		1	
Durham.....	2	2		<i>Manufactures.</i>			
Essex .....		3	2	Woollen Manufacturers .....	3	4	2
Gloucester.....	3	4		Cotton „ .....	1	2	2
Hants.....	2	3		Linen „ .....	1	5	1
Hereford .....	1	3	2	Silk „ .....		1	1
Hertford .....	2	3	2	Printers and Dyers .....			1
Huntingdon .....				Lace Manufacturers .....	1	8	4
Kent .....	5	5	1	Hosiery „ .....	3	3	1
Lancashire.....	11	1	1	Hardware „ .....	1		
Leicester .....		5		Earthenware „ .....	1	2	3
Lincoln .....	1	2	1	Glass „ .....	2	3	3
Middlesex (exclusive of the Metropolis) }	12	7	3	Paper „ .....		4	2
Monmouth.....				Builders .....	4	6	4
Norfolk .....	1	4	2	Miscellaneous Manufacturers....	9	14	16
Northampton.....	2			<i>Commerce.</i>			
Northumberland .....		1		Bankers and Merchants .....	3	5	2
Nottingham .....		2	2	Shipowners, Warehousemen, Brokers, and Wholesale Dealers generally .....	1	3	4
Oxford .....	1	3		<i>Retail and Handicraft Trades.</i>			
Rutland .....	2	4	3	Bakers .....	3	5	4
Salop .....		1	4	Butchers .....	3	4	2
Somerset (including Bristol) }	7	4	3	Corn and Hay Dealers .....		1	
Stafford .....	1	3		Innkeepers and Victuallers.....	11	7	3
Suffolk .....	1	4	6	Wine and Spirit Merchants .....	11	6	4
Surrey (exclusive of the Metropolis) }	11	13	16	Dealers in Grocery, Drugs, and Spices .....	4	5	4
Sussex .....				Makers of, and Dealers in, Clothing .....	1		
Warwick .....	1	2	3	Makers of, and Dealers in, Furniture .....	2	5	6
Westmoreland .....		2	4	Coach Builders .....		2	2
Wilts .....	1			Miscellaneous .....	12	15	16
Worcester .....		1	3				
York (East Riding) ...	3	1	6				
„ (North Riding) ...	1	3					
„ (West Riding) ...	1	4					
Wales .....	1	3					
Total .....	98	129	96	Total.....	98	129	96

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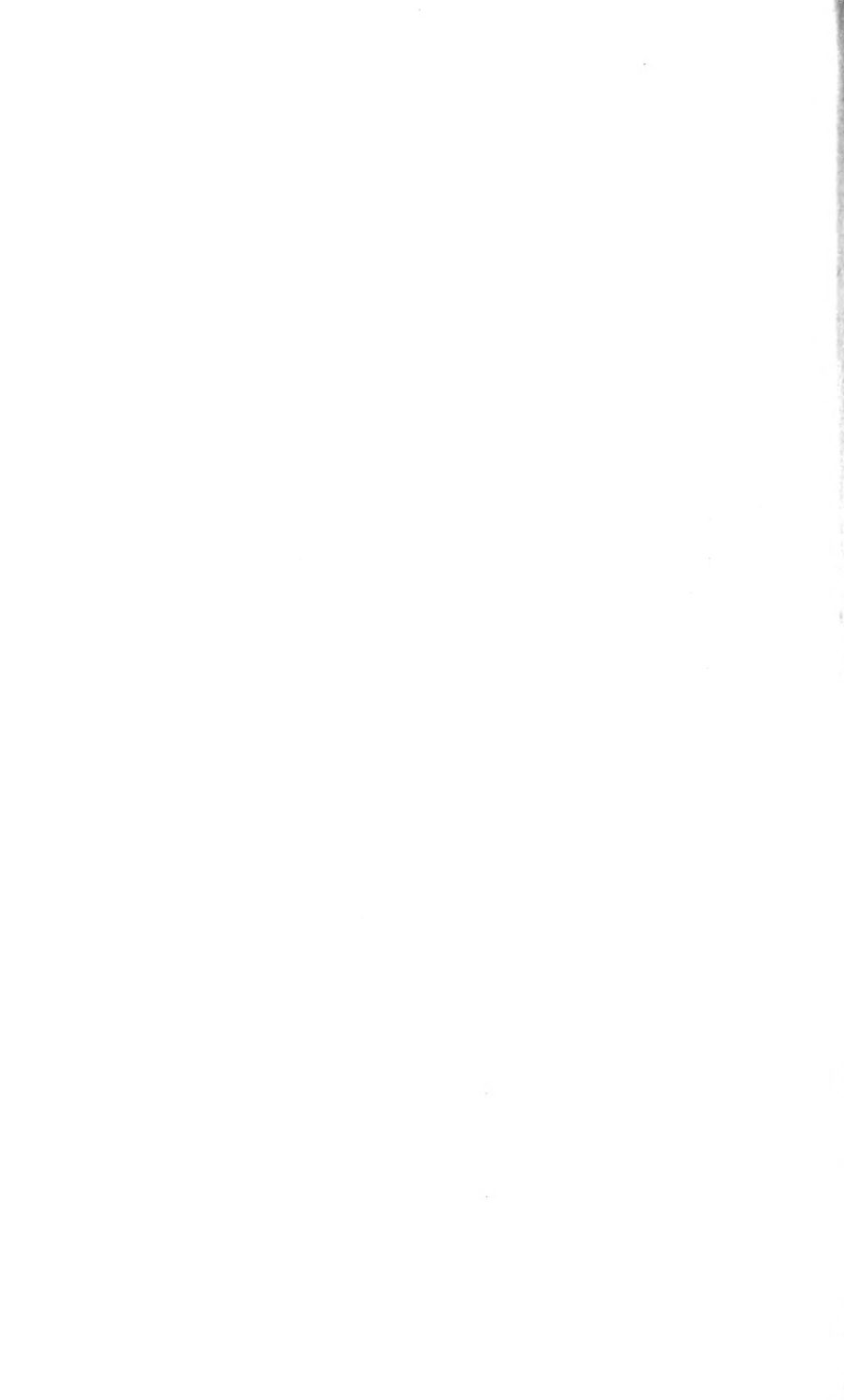
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